

PROGRAM SCHEDULE

MONDAY, APRIL 26, 1999

HUMAN BIOLOGY ASSOCIATION FUNCTIONS

5:00PM-7:00PM Registration
 Hayes Foyer

6:00PM-11:00PM Executive Committee Meeting / Dinner
 Garfield

PALEOPATHOLOGY ASSOCIATION FUNCTIONS

5:00PM-7:00PM Registration
 Franklin D Foyer

TUESDAY, APRIL 27, 1999

7:00AM-9:00AM *Human Biology* Editorial Board Breakfast
 Morrow

HUMAN BIOLOGY ASSOCIATION FUNCTIONS

8:00AM-6:00PM Registration
 Hayes Foyer

8:00AM-6:00PM Podium Sessions
 Hayes

8:00AM-6:00PM Poster Session
 Franklin BCD

8:00PM-10:00PM Reception and Cash Bar
 Franklin BCD

PALEOANTHROPOLOGY SOCIETY FUNCTIONS

8:00AM-6:00PM Scientific Sessions
 Harrison

PALEOPATHOLOGY ASSOCIATION FUNCTIONS

8:00AM-6:00PM Registration
 Franklin D Foyer

8:00AM-6:00PM	Scientific Sessions Union DE
8:00AM-6:00PM	Poster Session Franklin BCD
6:00PM-8:00PM	Cocktails and Dinner Morrow

WEDNESDAY, APRIL 28, 1999

HUMAN BIOLOGY ASSOCIATION FUNCTIONS

7:30AM-9:00AM	<i>American Journal of Human Biology</i> Editorial Board Breakfast Grant
8:00AM-6:00PM	Registration Hayes Foyer
8:00AM-6:00PM	Poster Session Franklin BCD
8:00AM-5:00PM	Podium Sessions Hayes
12:30PM-2:15PM	Annual Awards Luncheon Grant/Harding
5:00PM-6:30PM	Business Meeting Hayes

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00AM-5:00PM	Registration Franklin D Foyer
8:00AM-5:00PM	AAPA Executive Committee Meeting Champaign
12:00PM-2:00PM	<i>American Journal of Physical Anthropology</i> Editorial Board Luncheon Knox
6:00PM-7:45PM	Career Development Committee Workshop "Professional Career Strategies and Opportunities", Moderator - Alan Ryan (Ross Laboratories), Participants - Anthony Commuzzie (Southwest Foundation for Biomedical

Research), Marilyn London (Private Contractor), Beth Miller (California State, LA), Anne Stone (New Mexico), Steve Ousley (Smithsonian Institution), Discussant - Andrew J. Petto (University of the Arts).
Union DE

8:00PM-10:00PM Annual Reception & Cash Bar
Regency South

PALEOANTHROPOLOGY SOCIETY FUNCTIONS

8:00AM-6:00PM Scientific Sessions
Harrison

PALEOPATHOLOGY ASSOCIATION FUNCTIONS

8:00AM-6:00PM Scientific Sessions
Union DE

THURSDAY, APRIL 29, 1999

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00AM-5:00PM Registration
Franklin D Foyer

8:00AM-5:00PM Books/Exhibits
Union ABC

8:00AM-5:00PM Poster Sessions
Franklin BCD; see below for details

8:00AM-5:00PM Podium Sessions
Morrow, Fairfield, Union DE, Marion; see below for details

5:30PM-6:30PM Plenary Lecture, Dr. David J.P. Barker, Director of the MRC
Environmental Epidemiology Unit, Southampton General Hospital, *Fetal
Origins of Disease in Later Life*
Delaware

NATIONAL CENTER FOR SCIENCE EDUCATION

12:00PM-1:30PM Lunchtime meeting, "Teaching Evolution", Organizers - Eugenie Scott
(NCSE), and Martin Nickels (Illinois State)
Champaign

DENTAL ANTHROPOLOGY ASSOCIATION FUNCTIONS

7:00PM-8:30PM Business meeting
Madison

PRIMATE BIOLOGY AND BEHAVIOR INTEREST GROUP

7:00PM-8:30PM Business Meeting
Champaign

AMERICAN ASSOCIATION OF ANTHROPOLOGICAL GENETICS FUNCTIONS

7:00PM-8:30PM Business Meeting
Marion

WILEY-LISS RECEPTION

8:30PM-11:30PM Peppercorn

FRIDAY, APRIL 30, 1999

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00AM-5:00PM Registration
Franklin D Foyer

8:00AM-5:00PM Books/Exhibits
Union ABC

8:00AM-5:30PM Poster Sessions
Franklin BCD; see below for details

8:00AM-6:00PM Podium Sessions
Morrow, Fairfield, Union DE, Madison; see below for details

12:00PM-2:00PM Luncheon. Speaker: Dr. Bennett Bertenthal, Assistant Director of Social,
Behavioral and Economic Sciences at the National Science Foundation
*Challenges and Opportunities for Funding Physical Anthropology
Research in the 21st Century.*
Hayes

8:00PM-11:00PM Business Meeting
Delaware ABC

AMERICAN DERMATOGLYPHICS ASSOCIATION FUNCTIONS

5:00PM-6:00PM Business Meeting
Franklin A

SATURDAY, MAY 1, 1999

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00AM-12:00PM Registration
Franklin D Foyer

8:00AM-12:00PM Books/Exhibits
Union ABC

8:00AM-4:30PM Poster Sessions
Franklin BCD; see below for details

8:00AM-5:15PM Podium Sessions
Morrow, Fairfield, Union DE, Madison; see below for details

5:30PM-7:00PM Awards Reception and Cash Bar
Peppercorn

THURSDAY, APRIL 29, 1999

SESSION 1

THURSDAY MORNING, APRIL 29, 1999

SESSION 1: FAIRFIELD

PRIMATES I: PRIMATE BIOLOGICAL VARIATION. CONTRIBUTED PAPERS.

- Chair:* M.J. Ravosa, Northwestern University Medical School, Chicago.
- 8:00 AM Dental development and canine dimorphism in the common chimpanzee, *Pan troglodytes*. G.T. Schwartz, University College London, UK, D.J. Reid, The Dental School, Newcastle upon Tyne, UK, C. Dean, University College London, UK.
- 8:15 Modeling gross occlusal wear in *Gorilla gorilla* using dental topographic analyses. M.D. Williamson, P.S. Ungar, University of Arkansas, Fayetteville.
- 8:30 The hardness of cercopithecine foods: Implications for the critical function of enamel thickness in exploiting fallback foods. J.E. Lambert, Southwest Missouri State University, Springfield, C.A. Chapman, University of Florida, Gainesville, R.W. Wrangham, N.L. Conklin-Brittain, Harvard University, Cambridge.
- 8:45 EMG of the anterior temporalis muscle in adult male baboons. C.E. Wall, K.R. Johnson, W.L. Hylander, Duke University, Durham.
- 9:00 Biomechanical scaling of the curvature of the mandibular condyle and glenoid fossa in primates. C.J. Vinyard, Northwestern University, Chicago.
- 9:15 Position of the vomeronasal organ in adult humans and mouse lemurs. T.D. Smith, N.M. Cerqua, H.P. Hoffman, T.A. Buttery, A.M. Burrows, Slippery Rock University, M.P. Mooney, M.I. Siegel, University of Pittsburgh.
- 9:30 A strategy for the morphometric analysis of the skull: Implications for macaques. R-L. Pan, C.E. Oxnard, University of Western Australia.
- 9:45 Form differences in the fetal craniofacial complex: A three dimensional (3D), morphological comparison between fetal pigtailed macaques (*Macaca nemestrina*) and humans (*Homo sapiens*). M.P. Zumpano, Johns Hopkins University, Baltimore.
- 10:00 INTERMISSION
- 10:15 Comparison of landmarks among *Papio* skulls, with extension of Procrustes methods to ridge curves. L.F. Marcus, City University of New York (CUNY), American Museum of Natural History (AMNH), New York Consortium in Evolutionary Primatology (NYCEP), S.R. Frost, CUNY, NYCEP, F. Bookstein,

THURSDAY, APRIL 29, 1999

SESSION 1 / SESSION 2

University of Michigan, Ann Arbor, D. Reddy, AMNH, E. Delson, CUNY, AMNH, NYCEP.

- 10:30 Taxonomic patterns of craniofacial dimorphism in anthropoids. J.M. Plavcan, New York College of Osteopathic Medicine, Old Westbury.
- 10:45 Statistical issues with the use of ratios and residuals as measures of sexual size dimorphism in comparative studies. R.J. Smith, Washington University, St. Louis.
- 11:00 The crucial role of scaling methods in comparative tests of primate cognitive evolution. R.O. Deaner, Duke University, Durham.
- 11:15 Relative brain size is not independent of body size in primates: Comparison between humans and capuchin monkeys. E. Gilissen, University of the Witwatersrand, Parktown, South Africa.
- 11:30 Regional cerebral blood flow in anaesthetized baboons (*Papio anubis*): The use of Positron Emission Tomography in anthropology. J.A. Kaufman, J. Phillips-Conroy, K.J. Black, J.S. Perlmutter, Washington University, St. Louis.
- 11:45 Modification of Layer IVA of primary visual cortex in ape and human evolution. T.M. Preuss, University of Southwestern Louisiana, New Iberia, H-X Qi, J.H. Kaas, Vanderbilt University, Nashville.

SESSION 2: MARION

PRIMATES II: PRIMATE BEHAVIOR. CONTRIBUTED PAPERS.

Chair: J.W. Froehlich, University of New Mexico, Albuquerque.

- 8:00 AM Pair-bonds in lemurs, monkeys, gibbons and humans? A preliminary evaluation of semantics and reality in pair-bond models. A. Fuentes, Central Washington University, Ellensburg.
- 8:15 Testicular size, social behavior, and ontogeny in wild baboons. C.J. Jolly, New York University, J.E. Phillips-Conroy, Washington University, St. Louis.
- 8:30 Emergence of despotic and egalitarian societies: An individual-oriented model for hypothesis generation on macaques. C.K. Hemelrijk, University of Zürich, Switzerland.
- 8:45 Is there adaptive value to reproductive termination in Japanese macaques? A test of the grandmother hypothesis. L.M. Fedigan, M.S.M. Pavelka, University of Alberta, University of Calgary, AB.

- 9:00 Can weaning age of infant primates be approximated using interbirth interval-gestation length? B. Behrens, University of New Mexico, Albuquerque.
- 9:15 Paternal investment in the monogamous fat-tailed dwarf lemur (*Cheirogaleus medius*) in northwestern Madagascar. A.E. Müller, University of Zürich, Switzerland.
- 9:30 Conflict and post-conflict behavior in a small group of chimpanzees (*Pan troglodytes*). C. Sanz, A. Fuentes, Central Washington University, Ellensburg.
- 9:45 The ontogeny of locomotor behavior in captive chimpanzees: Comparison with wild chimpanzees. M.L. Schwandt, Arizona State University, Tempe.
- 10:00 Age, locomotion, and positional behavior in Coquerel's sifakas (*Propithecus verreauxi coquereli*). L.L. Taylor, University of Miami, Coral Gables, M.S. Pasin, Northern Illinois University, DeKalb.
- 10:15 INTERMISSION
- 10:30 Factors contributing to interspecific differences in play frequency of Kibale Forest monkeys. E.A. Worch, University of Michigan, Flint.
- 10:45 The social behavior of wild *Saimiri sciureus sciureus* in Suriname. S. Boinski, University of Florida, Gainesville.
- 11:00 Social scratch, a newly reported custom in social grooming by the chimpanzees (*Pan troglodytes schweinfurthii*) of Mahale Mountains National Park, Tanzania. L.F. Marchant, W.C. McGrew, Miami University, Oxford, OH, M. Nakamura, Kyoto University, Japan.
- 11:15 The effect of moonlight on the behavior of spectral tarsiers. S.L. Gursky, City University of New York, Flushing.
- 11:30 Brains and behavior in *Hylobates*. J.C. Redmond, Jr., State University of New York, Albany.
- 11:45 Cerebrospinal fluid monoaminergic metabolites differ in wild anubis, hamadryas, and hybrid baboons, possibly reflecting variation in life history. J.R. Kaplan, Wake Forest University, Winston-Salem, J.E. Phillips-Conroy, Washington University, St. Louis, C.J. Jolly, New York University, M.B. Fontenot, Wake Forest University, Winston-Salem, J.J. Mann, Columbia University, New York.

SESSION 3: MORROW

GENETICS I: HUMAN AND NON-HUMAN PRIMATE MOLECULAR EVOLUTION AND BIOGEOGRAPHY. CONTRIBUTED PAPERS.

Chair: D.A. Merriwether, University of Michigan, Ann Arbor.

- 8:15 AM Y chromosome variation in the Hominoidea. T.K. Altheide, M.F. Hammer, University of Arizona, Tucson.
- 8:30 Y chromosome diversity in *Pan troglodytes*. A.C. Stone, R. Bonner, M.F. Hammer, University of Arizona, Tucson.
- 8:45 Y-chromosome phylogeny of the macaques (Cercopithecidae: *Macaca*). A.J. Tosi, J.C. Morales, D.J. Melnick, Columbia University, New York.
- 9:00 Evolutionary genetics of chimpanzees (*Pan troglodytes*) in Nigeria and Cameroon. M.K. Gonder, J.F. Oates, City University of New York, T.R. Disotell, New York University.
- 9:15 Mitochondrial DNA sequence variation in baboons (*Papio hamadryas*). T.K. Newman, Southwest Foundation for Biomedical Research, San Antonio, C.J. Jolly, New York University, J. Rogers, Southwest Foundation for Biomedical Research, San Antonio.
- 9:30 Pleistocene dispersal of African hamadryas baboons onto the Arabian peninsula. D.E. Wildman, New York University & NYCEP.
- 9:45 Biogeography and evolution in spider monkeys (*Ateles spp.*). A.C. Collins, University of Wisconsin, Madison.
- 10:00 Phylogenetic relationships among *Saimiri* species based on nuclear and mitochondrial DNA evidence. S. Cropp, University of Chicago, S. Boinski, University of Florida, Gainesville.
- 10:15 INTERMISSION
- 10:30 Mitochondrial DNA variation of prehistoric Eastern Canadian Arctic inhabitants. M.G. Hayes, University of Utah, Salt Lake City.
- 10:45 Origins and affinities of tribal populations in South India. M. Bamshad, W.S. Watkins, M.E. Dixon, University of Utah, Salt Lake City, B. Bhaskara Rao, J.M. Naidu, Andhra University, Visakhapatnam, India, B.V.R. Prasad, Anthropological

Survey of India, Mysore, India, P.G. Reddy, University of Madras, Madras, India, P.K. Das, Utkal University, Bhubaneswar, India, P.C. Reddy, SriVenkateswara University, Tirupati, India, P.B. Gai, Karnatak University, Dharwad, India, A. Bhanu, University of Calicut, Kerala, India, M.F. Hammer, A. Rasanayagam, University of Arizona, Tucson, L.B. Jorde, University of Utah, Salt Lake City.

- 11:00 Genetic variation and affinities in the New York burial ground of enslaved Africans. R.A. Kittles, G. Morris, M. George, G. Dunston, M. Mack, Howard University, Washington, DC, F.L.C. Jackson, University of Maryland, College Park, S.O.Y. Keita, Oxford University, UK, M. Blakey, Howard University, Washington, DC.
- 11:15 A deletion polymorphism in the $\alpha 2(1)$ collagen gene (COL1A2): Genetic evidence for a non-African population whose descendants spread to all continents. R.J. Mitchell, N.G. White, La Trobe University, Melbourne, Australia, M.H. Crawford, J. McComb, University of Kansas, Lawrence, C. Tyler-Smith, University of Oxford, UK, S.S. Papiha, University of Newcastle, UK, M.S. Schanfield, AGTC, Denver.
- 11:30 Individual and population level admixture estimates for geographically defined African-American populations. M.D. Shriver, A. Marcini, E.J. Parra, Allegheny University of the Health Sciences, Pittsburgh.
- 11:45 Population bottlenecks and human evolution. J. Hawks, University of Michigan, Ann Arbor.

SESSION 4: UNION DE

PALEOPATHOLOGY I. CONTRIBUTED PAPERS.

Chair: P.M. Lambert, Utah State University, Logan.

- 8:00 AM Periostitis - more than just "non-specific infection:" A comparison of medical museum and archaeological bone specimens. D.A. Weston, University College London, UK.
- 8:15 Intact protein molecules in archaeological bones: Bone matrix as a treasure chest of ancient diseases and living conditions. T.H. Schmidt-Schultz, M. Schultz, University of Göttingen, Germany.
- 8:30 Approaches to the study of osteoporosis: Key findings from a comparative study. M.B. Brickley, The University of Birmingham, UK.
- 8:45 Tuberculosis in young Portuguese earlier this century: A radiological study. A.L. Santos, Universidade de Coimbra, Portugal, C.A. Roberts, University of Bradford, U.K.

THURSDAY, APRIL 29, 1999

SESSION 4 / SESSION 5

- 9:00 Measures of environmental stress in non-adult skeletons from pre- and post-industrial communities in England. M.E. Lewis, University of Bradford, UK.
- 9:15 An assessment of nutritional stress in the skeletons of South African whites and blacks. E.N. L'Abbé, Louisiana State University, Baton Rouge, M.Y. İşcan, S.R. Loth, University of Pretoria, South Africa.
- 9:30 Neonatal line thickness and delivery at Isola Sacra (2nd-3rd cent. AD, Rome, Italy). L. Bondioli, R. Machiarelli, National Prehistoric Ethnographic "L. Pigorini" Museum, Rome, Italy.
- 9:45 A biocultural study of health and centralized economic authority during the Roman Period of Ancient Egypt. T.L. Tucker, Ohio State University, Columbus.
- 10:00 INTERMISSION
- 10:15 Skeletal health of an elderly sample of Civil War era veterans. H.D. Dockall, U.S. Army Central Identification Laboratory, Hickam Air Force Base, HI, J.E. Baker, Texas A&M University, College Station.
- 10:30 A regional perspective on the skeletal manifestations of slavery. D.C. Boyd, C.C. Boyd, Radford University, Radford, VA.
- 10:45 Ancestral pueblo women's bodies and lives. P.K. Stone, Hampshire College, Amherst, MA.
- 11:00 Cultural and taphonomic alterations in several formative populations from the Mexican Basin. C.M. Pijoan, Instituto Nacional de Antropología e Historia, México.
- 11:15 Environmental change, sociopolitical power and the diet and health of elites during the emergence of the Tarascan state. L. Cahue, Michigan State University, East Lansing.
- 11:30 Fluctuating asymmetry, stress, and health among children in a Caribbean village. M.V. Flinn, D.V. Leone, University of Missouri, Columbia, B.G. England, University of Michigan Hospitals, Ann Arbor.

SESSION 5: FRANKLIN BCD

SKELETAL BIOLOGY I. POSTERS.

Chair: L. Newell-Morris, University of Washington, Seattle.

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| Times: | 8:00-8:30 AM | Poster set-up. |
| | 8:30-10:00 AM | Authors of even-numbered posters present for questions. |
| | 10:30 AM-12:00 PM | Authors of odd-numbered posters present for questions. |
| | 12:00-12:30 PM | Poster take-down. |
1. Human fetal cranial base flexion and brain volumes: A high resolution Magnetic Resonance Imaging (hrMRI) study. N. Jeffery, F. Spoor, University College London, UK.
 2. Sagittal growth of the cranial base in second trimester normal and unilateral cleft lip only fetuses. T.F. Sherwood, M.P. Mooney, T.D. Smith, J.J. Sciote, G.M. Cooper, M.I. Siegel, University of Pittsburgh, Slippery Rock University.
 3. Effects of neurocranial surgery on basicranial growth in isolated sagittal synostosis. V.B. DeLeon, M.P. Zumpano, J.T. Richtsmeier, Johns Hopkins University, Baltimore.
 4. Preferred collagen fiber orientation in the human mid-shaft femur. H.M. Goldman, T.G. Bromage, City University of New York, R. Bruns, J.G. Clement, C.D.L. Thomas, S. Feik, University of Melbourne, Victoria, Australia.
 5. Quantitative analysis of primate trabecular bone architecture: Comparison of high resolution X-ray computed tomography and histologic sections. R.J. Fajardo, State University of New York, Stony Brook, T.M. Ryan, J. Kappelman, University of Texas, Austin.
 6. The limits and possibilities of micro CT scanning. C.J. Valeri, R.H. Reeves, C.B. Ruff, J.T. Richtsmeier, Johns Hopkins University, Baltimore.
 7. A survey of remodeling in the vertebrate skeleton, part II. R.A. Walker, New York Chiropractic College, Seneca Falls, C.O. Lovejoy, Kent State University, Kent.
 8. A test of methods for sex determination for the os coxae using the ID3 algorithm. D.G. McBride, M.T. Vennemeyer, M.J. Dietz, University of Missouri, Columbia, S.A. Meadors, Haskell Indian Nations University, Lawrence, R.A. Benfer, Jr., University of Missouri, Columbus.
 9. Mandibular ramus flexure and determination of sex. C.A. Hill, University of Kansas, Lawrence.
 10. Sex determination from the humerus of South African blacks and whites. M. Steyn, M.Y. İşcan, University of Pretoria, South Africa.

11. Computer program for sex diagnosis of the human pelvic bone based on probabilistic approach. F. Houët, J. Bruzek, P. Murail, UMR 5809 CNRS, University Bordeaux 1, France.
12. Maternal blood lead levels and infant birthweight. K.L. Knutson, State University of New York, Albany.
13. Estimation of fetal age. R.J. Sherwood, University of Wisconsin, Madison, R.S. Meindl, Kent State University, Kent, H.B. Robinson, The Toledo Hospital, R.L. May, Morningside College, Sioux City.
14. Modeling gestational age-specific infant and neonatal mortality. T.B. Gage, State University of New York, Albany.
15. Population-specific histological age estimating method: A test. H. Cho, M. Streeter, S.D. Stout, University of Missouri, Columbia.
16. Skeletal maturity of human foot bones and radiographic estimation of sex and age in adolescents and juveniles. W.C. Hartwig, R.A. Rowan, Touro University, San Francisco, J.M. Whitaker, T. Williams, L. Rousseau, California College of Podiatric Medicine, San Francisco.
17. Age changes in the auricular surface of the sacroiliac joint in *Macaca mulatta*. H.P. York, C.O. Lovejoy, R.S. Meindl, Kent State University, Kent.
18. Stature estimations and personal identification from lengths of long bones of Finnish soldiers killed in the World War II in Russia. T.P. Formisto, Ankarstocksvägen, Bromma, Sweden.
19. The Pretoria Collection: A new source of documented skeletal material in South Africa. J.H. Meiring, S.R. Loth, M. Loots, University of Pretoria, South Africa.
20. Brain size and cognitive ability: A review with new evidence. J.P. Rushton, University of Western Ontario, London, ON.
21. Morphometric variation of the human auditory ossicles. T.M. Greiner, R.A. Walker, New York Chiropractic College, Seneca Falls.
22. Metric analysis of non-metric traits categorizing nasal form. R.L. Hall, Oregon State University, Corvallis.

THURSDAY, APRIL 29, 1999

SESSION 5 / SESSION 6

23. Individual variation in growth and body composition in a group of captive infant gorillas (*Gorilla gorilla*). A. Bellisari, C. Greenberg, B. Towne, Wright State University, Dayton.
24. Vertebral osteophytosis and mechanical stress in apes. K.J. Krumrine, Kent State University, Kent.
25. Degenerative disk disease in *Macaca nemestrina*. L. Newell-Morris, P.A. Kramer, L. Santoni, P. Simkin, S. Ott, University of Washington, Seattle.
26. Bilateral fluctuating asymmetry in skeletal growth and maturation as an indicator of environmental stress. A.M. Albert, University of North Carolina, Wilmington.
27. Effects of pregnancy and lactation on parameters of bone metabolism in the common marmoset monkey. R.A. Power, C.P. Jerome, M.P. Power, O.T. Oftedal, D.G. Layne, S.D. Tardif, Kent State University, Kent.
28. Altitude and climatic influences on *Macaca* morphology. K.J. Weinstein, University of Florida, Gainesville.
29. Socioeconomic conditions as reflected by yearly fluctuations in mean height or weight: Time series analysis of cross-sectional data from Taiwan, 1969 to 1990. B. Floyd, University of Oregon, Eugene.
30. Growth of the Akwesasne Mohawk Nation youth. M.V. Gallo, L.M. Schell, J. Newman, State University of New York, Albany, The Akwesasne Task Force on the Environment, Rooseveltown, NY.
31. Growth of 19th century Native American from the Great Plains. J.L. Bennett, R.L. Jantz, University of Tennessee, Knoxville.
32. Stunting and nutritional intake from birth to five years in urban African children from Soweto, South Africa. N. Cameron, Loughborough University, UK, University of the Witwatersrand Medical School, Johannesburg, South Africa, J.M. McKeown, University of the Witwatersrand Dental School, Johannesburg, South Africa.

SESSION 6: FRANKLIN BCD

HUMAN BIOLOGY I: ADAPTATION AND HEALTH AND DISEASE. POSTERS.

Chair: L. Leidy, University of Massachusetts, Amherst.

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| Times: | 8:00-8:30 AM | Poster set-up. |
| | 8:30-10:00 AM | Authors of even-numbered posters present for questions. |
| | 10:30 AM-12:00 PM | Authors of odd-numbered posters present for questions. |
| | 12:00-12:30 PM | Poster take-down. |
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33. Towards a bio-anthropology of regulations and adaptations. Ph. Lefevre-Witier, CNRS, Hopital Purpan, Toulouse, France.
 34. To what extent might the short working day of Australian hunter-gatherers have been limited by heat stress? S.J. Ulijaszek, University of Oxford, UK, W. Matthew United States Army Research Institute of Environmental Medicine, Natick.
 35. PMS: A bioculture-bound syndrome. M.K. Melby, E.O. Smith, Emory University, Atlanta.
 36. Attention deficit hyperactivity disorder (ADHD): Adaptive or maladaptive? J.C. Stevenson, J.F. Baird, D.C. Williams, Western Washington University, Bellingham.
 37. Recognizing the strangeness of nonverbal behavior cross-culturally. K.L. Schmidt, Indiana University of Pennsylvania, Indiana, PA.
 38. Population variation in characteristic aspects of children's behavior and frequency of child behavior problems: Colombian and US samples. A.A. Brewis, R.W. Kamphaus, University of Georgia, Athens.
 39. Soft tissue asymmetry of the human hand: A pilot study. C.N. Coan, University of Massachusetts, Amherst.
 40. Association of low salivary progesterone with low salivary cortisol levels in rural Aymara women. A. McCluskey, G.R. Bentley, University of Cambridge, UK, V.J. Vitzthum, State University of New York, Binghamton, H. Spielvogel, E. Caceres, Bolivian Institute of High Altitude Biology, La Paz, K. Heidleberg, University of California, Riverside, R.T. Chatterton, Northwestern University, Chicago.
 41. Colostrum feeding behavior and initiation of breastfeeding in rural Bangladesh. M.A. Grimes, D.J. Holman, Pennsylvania State University, University Park.
 42. Comparison between factorial and heart rate monitoring methods in assessing energy expenditure. I. Sarton-Miller, P.A. Kramer, University of Washington, Seattle.
 43. Daily energy expenditure among lactating urban Bangladeshi women. M. Rashid, National Institute of Preventive and Social Medicine, Dhaka, Bangladesh, S.J. Ulijaszek, University of Oxford, UK.

THURSDAY, APRIL 29, 1999

SESSION 6 / SESSION 7

44. Is being Hispanic a risk factor for non-insulin dependent diabetes mellitus (NIDDM)? B.M. Chakraborty, Community Health Practice Module, Houston, R. Chakraborty, University of Texas School of Public Health, Houston.
45. Associations between birthweight and blood pressure in adulthood: The Fels Longitudinal Study. E.W. Demerath, B. Towne, W.C. Chumlea, R.M. Siervogel, Wright State University School of Medicine, Dayton.
46. Blood pressure variation in urban Caribbean-Americans. R.A. Halberstein, University of Miami, Coral Gables.
47. Age and perceived stress independently influence daily blood pressure variation among women employed in wage jobs. G.D. James, State University of New York, Binghamton, D.H. Bovbjerg, Mount Sinai School of Medicine, New York.
48. Anthropometric determinants of biological risk factors for cardiovascular disease in Mexican Americans from the Third National Health and Nutrition Examination Survey (NHANES III, 1988-1994). A.S. Ryan, Abbott Laboratories, Columbus.
49. Kaposi's sarcoma-associated herpesvirus-like sequences found in Yanomami Indians. L.D. Severson, R.W. Lang, D.E. Crews, J.E. Shaw, Ohio State University, Columbus.

THURSDAY AFTERNOON, APRIL 29, 1999

SESSION 7: FAIRFIELD

PALEOANTHROPOLOGY I: HOMO AND NEANDERTALS. CONTRIBUTED PAPERS.

Chair: K.R. Rosenberg, University of Delaware.

- 1:00 PM Morphology and diversity in fossil hominids: Accepting *Homo erectus* and *H. ergaster* as separate taxa is just the beginning. J.H. Schwartz, University of Pittsburgh, I. Tattersall, American Museum of Natural History, New York.
- 1:15 Morphological continuity in African *Homo*, UA 31 considered. T.T. Morrow, University of Michigan, Ann Arbor.
- 1:30 Body size, body proportions and encephalization in the Jinniushan specimen. K.R. Rosenberg, University of Delaware, Newark, Lü Z., Peking University, Beijing, China, C.B. Ruff, Johns Hopkins University, Baltimore.
- 1:45 Mammalian genetics and Neandertal morphology. E.J. Bowers-Bienkowski, Ball State University, Muncie.

THURSDAY, APRIL 29, 1999

SESSION 7

- 2:00 Regional variation in human mandibular morphology. C.B. Stringer, The Natural History Museum, London, UK, M.C. Dean, University College London, UK, L.T. Humphrey, The Natural History Museum, London, UK.
- 2:15 Neck proportions in modern humans and Neanderthals. F. Spoor, W. Wood, University College London, UK.
- 2:30 Changes in population structure in Late Pleistocene Eurasians. R. Caspari, J. Hawks, University of Michigan, Ann Arbor.
- 2:45 Modeling hominid locomotion: Biomechanical influences of Neandertal pelvic morphology and anatomical orientation. J.A. Miller, M.M. Gross, University of Michigan, Ann Arbor.
- 3:00 INTERMISSION
- 3:15 Biomechanical analysis of the human superior pubic ramus, with implications for Neandertal pubic morphology. M.T. Black, Duke University, Durham.
- 3:30 Using canonical variates and generalized distances on the postcrania of Qafzeh, Skhul, Cro-magnon, Predmost, Taforalt, Neolithic French, Natufians, and recent moderns to assess populational affinities. C.B. Quintyn, University of Michigan, Ann Arbor.
- 3:45 Computational methods for addressing age and sex sample bias: A south-central European Neandertal test case. J.C.M. Ahern, University of North Dakota, Grand Forks, ND.
- 4:00 Weidenreich revisited: Morphology of the Upper Cave crania. D.L. Cunningham, University of Missouri, Columbia.
- 4:15 An Australasian test of the Recent African Origin Theory using the WLH-50 Calvarium. M.H. Wolpoff, J. Hawks, S. Oh, K. Hunley, S. Dobson, G. Cabana, P. Dayalu, University of Michigan, Ann Arbor.
- 4:30 Modern human origins and extant modern humans: An uneasy fit? J.H. Kidder, University of Tennessee, Knoxville.
- 4:45 Evolutionary morphology: Dynamics of adaptation in New World populations support continuity in Old World successions. R.B. Eckhardt, Pennsylvania State University, University Park.

SESSION 8: UNION DE

HUMAN BIOLOGY II: HUMAN BIOLOGY IN THE ARCHIVES: DEMOGRAPHY, HEALTH, NUTRITION, AND GENETICS IN HISTORICAL POPULATIONS. SYMPOSIUM.

A significant number of physical anthropologists engage in the research of populations whose data come primarily from the historical record. It is our contention that distinctive approaches have emerged from these investigations that can be differentiated from the work of colleagues in, for example, historical demography or the history of medicine. Yet, there has been little opportunity to pull a body of this work together and to reflect on its contributions and common themes. Another feature of this work is that it often incorporates physical evidence from the archaeological record, medical collections, or contemporary health and/or genetic data from the descendants of these historical populations. Historical projects thus fill gaps in the chronologies of anthropological populations, extend the longitudinal analysis of microevolutionary processes, and enhance our biocultural understanding of the human condition. The purpose of this session is to provide a forum in which researchers actively engaged in historical projects can present results of their work while at the same time more explicitly considering the place of their research in the new physical anthropology.

Organizers

and Chairs: A. Swedlund, University of Massachusetts, Amherst, and D.A. Herring, McMaster University, Hamilton, ON.

Co-sponsored by the Human Biology Association.

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| 1:00 PM | Introduction (no abstract). A. Swedlund, University of Massachusetts, Amherst, D.A. Herring, McMaster University, Hamilton, ON. |
| 1:15 | War and population change in Finland. J. H. Mielke, University of Kansas, Lawrence. |
| 1:30 | Children of the poor: Life in the Erie County Almshouse during the mid-nineteenth century. R.L. Higgins, State University of New York, Potsdam. |
| 1:45 | Skeletal markers of therapy and custodialism in a 19th-century asylum. S.M. Phillips, State University of New York, Albany. |
| 2:00 | Anthropometric data, population genetics, and population history. J.H. Relethford, State University of New York, Oneonta. |
| 2:15 | Monitored growth: Anthropometrics and health history records at a New England middle school, 1935-1960. L.E. Leidy, University of Massachusetts, Amherst. |
| 2:30 | Where were the women? A.L. Grauer, Loyola University, Chicago. |

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SESSION 8 / SESSION 9A

- 2:45 How can mathematical models help the dead to speak? L. Sattenspiel, University of Missouri, Columbia.
- 3:00 INTERMISSION
- 3:15 The cholera years in Rochester, New York. J.E. Sirianni, State University of New York, Buffalo.
- 3:30 Cholera, politics and health: An examination of the Vulgar Disease in the 19th century Gibraltar. L.A. Sawchuk, University of Toronto, Scarborough, ON.
- 3:45 The scarlet fever epidemics of 1858-68: A case of evolved pathogenic virulence? A.C. Swedlund, A. Donta, University of Massachusetts, Amherst.
- 4:00 The use of archives in the study of microevolution: The case of Escazú, Costa Rica L. Madrigal, University of South Florida, Tampa.
- 4:15 Malnutrition among northern peoples of Canada in the 1940s: An ecological disaster, not enzyme deficiencies. D.A. Herring, S. Abonyi, McMaster University, Hamilton, ON, R. Hoppa, Max Planck Institute for Demographic Research, Rostock, Germany.
- 4:30 Native American birth seasonality at the California Missions. P.L. Walker, University of California, Santa Barbara, J.R. Johnson, Santa Barbara Museum of Natural History, CA.
- 4:45 Open discussion.

SESSION 9A: MARION

PALEOANTHROPOLOGY II: PRIMATE MODELS, METHODOLOGICAL ISSUES, GENERAL TOPICS. CONTRIBUTED PAPERS.

Chair: G.H. Albrecht, University of Southern California, Los Angeles.

- 1:00 PM Age at first molar emergence in *Afropithecus turkanensis*. J. Kelley, University of Illinois, Chicago.
- 1:15 Effect of analog choice on comparative morphometric relationships among fossil hominids. J.M.A. Miller, G.H. Albrecht, University of Southern California, Los Angeles, B.R. Gelvin, California State University, Northridge.
- 1:30 An investigation of structural and functional correlations between cranial characters and character complexes used in the determination of human phylogeny. S. Athreya,

Washington University, St. Louis, M. Chang, M. Glantz, M. Murphy, University of Pennsylvania, Philadelphia.

- 1:45 The meaning of emptiness: Pneumatization patterns of great ape paranasal sinuses via CT imaging. S. Marquez, E. Delson, A. Silvers, W. Lawson, J.T. Laitman, Mount Sinai School of Medicine, CUNY.
- 2:00 Should muscle have most favored tissue status? A.L. Zihlman, University of California, Santa Cruz, R.K. McFarland, Cabrillo College, Aptos, CA.
- 2:15 Testing the application of phylogenetic taxonomy to fossil hominine taxa using an extant primate model. M.L. Chang, University of Pennsylvania, Philadelphia.
- 2:30 The sexual division of labour in humans: A comparative analysis. C.A. Key, University College London, UK.

SESSION 9B: MARION

HUMAN BIOLOGY III: HEALTH AND DISEASE. CONTRIBUTED PAPERS.

Chair: B. Shell-Duncan, University of Washington, Seattle.

- 3:00 PM Familial risk of high blood pressure in Canada. P.T. Katzmarzyk, York University, Toronto, ON, Laval University, Ste-Foy, QC, T. Rankinen, L. Pérusse, Laval University, Ste-Foy, QC, D.C. Rao, Washington University, St. Louis, C. Bouchard, Laval University, Ste-Foy, QC.
- 3:15 Genetic and environmental correlations between various anthropometric and blood pressure traits among Samoans. A.C. Choh, State University of New York, Albany.
- 3:30 Ethnic difference in the relationship between ambulatory blood pressure and age in school teachers in Hawaii: Japanese-Americans and Caucasians. D.E. Brown, S.L. Aki, M.B. Etrata, A.A. Jones, University of Hawaii at Hilo, G.D. James, State University of New York, Binghamton.
- 3:45 Depressive symptoms, unemployment, and father-absence: A preliminary comparison of rural and urban Botswana men. S.A. Decker, Emory University, Atlanta.
- 4:00 Maternal insulin competence and sexual dimorphism in human fat patterning. B.L. O'Neil, University of Pennsylvania, Philadelphia.
- 4:15 Fertility in post-menopausal American Indian women: The Strong Heart Study. K.E. North, J.W. MacCluer, Southwest Foundation for Biomedical Research, San Antonio,

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SESSION 9B / SESSION 10

L.D. Cowan, University of Oklahoma, Oklahoma City, B.V. Howard, Medlantic Research Institute, Washington, DC.

- 4:30 Effect of settlement and development on child nutritional status: Individual, household and community level factors. B. Shell-Duncan, K. Snyder, University of Washington, Seattle, W. Obiero, University of Michigan, Ann Arbor.
- 4:45 Oral and postcranial bone-gain patterns at 2-year recall. C.F. Hildebolt, T.K. Pilgram, N. Yokoyama-Crothers, M. Dotson, J. Muckerman, J. Hauser, S. Cohen, E. Kardaris, M. Vannier, R. Civitelli, Washington University, St. Louis, J. Hanes, M. Shrout, Medical College of Georgia, Augusta.

SESSION 10: MORROW

PRIMATES III: PRIMATE ECOLOGY. CONTRIBUTED PAPERS.

Chair: L.J. Digby, Duke University, Durham.

- 1:00 PM Food for thought: Evaluating phenological methods as food availability estimates. C.A. Hemingway, Duke University, Durham, D.J. Overdorff, University of Texas, Austin.
- 1:15 What makes a food contestable? Food properties and contest competition in vervets and patas monkeys in Laikipia, Kenya. J.D. Pruetz, L.A. Isbell, University of Illinois, Urbana, University of California, Davis.
- 1:30 Feeding rates and social dominance among white-faced saki females. M.A. Norconk, Kent State University, Kent, T.M. Gleason, Washington University, St. Louis, A.L. Harrison, Kent State University, Kent.
- 1:45 Distribution and evolution of feeding tool use in primates. C.P. Van Schaik, R.O. Deaner, Duke University, Durham.
- 2:00 The foraging adaptations of the *Cercocebus-Mandrillus* clade. J.G. Fleagle, State University of New York, Stony Brook, W.S. McGraw, New York College of Osteopathic Medicine, Old Westbury.
- 2:15 Diet of the slender loris (*Loris tardigradus lydekkerianus*) in Dindigul District, Tamil Nadu, India. K.A. Nekaris, Washington University, St. Louis.
- 2:30 Cognitive aspects of foraging in tamarin single- and mixed-species troops (*Saguinus imperator* and *S. fuscicollis*). J.C. Bicca-Marques, P.A. Garber, University of Illinois, Urbana.

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SESSION 10 / SESSION 11

- 2:45 Hominoid insectivory: Meta-analysis of optimal foraging. W.C. McGrew, Miami University, Oxford, OH.
- 3:00 INTERMISSION
- 3:15 A partly habituated community of dry-habitat chimpanzees in the Semliki Valley Wildlife Reserve, Uganda. K.D. Hunt, A.J.M. Cleminson, Indiana University, Bloomington, J. Latham, Pennsylvania State University, University Park, R.I. Weiss, Primate Rescue Center, Nicholasville, KY, S. Grimmond, Indiana University, Bloomington.
- 3:30 The number of males in primate social groups: A comparative test of the socio-ecological model. C.L. Nunn, Duke University, Durham.
- 3:45 Group transfer and male competition in *Propithecus verreauxi*: Insights into factors mediating male infanticide in a seasonally breeding primate. D.K. Brockman, Duke University, Durham, P.L. Whitten, Emory University, Atlanta.
- 4:00 Aspects of social organization in *Microcebus rufus*: Results from a long-term mark-recapture study in Ranomafana National Park, Madagascar. S.A. Atsalis, Northwestern University, Evanston.
- 4:15 Factors influencing census results on *Lepilemur* and *Microcebus* in southwestern Madagascar. L.T. Nash, Arizona State University, Tempe.
- 4:30 Assessment of the howling monkey (*Alouatta palliata*) population on Hacienda La Pacifica, Guanacaste, Costa Rica. M.R. Clarke, E.L. Zucker, C.M. Crockett, M. Zaldivar, Tulane University, New Orleans, Loyola University New Orleans, Washington Regional Primate Research Center, Universidad de Costa Rica.
- 4:45 Topographic effects on measures of primate habitat-use in mountainous study sites in Japan and Africa. D.S. Sprague, National Institute of Agro-Environmental Sciences, Tsukuba, Japan, A. Matsumoto-Oda, Kyoto University, Japan.

SESSION 11: FRANKLIN BCD

PRIMATES IV: PRIMATE BIOLOGICAL VARIATION. POSTERS.

Chair: J.M. Plavcan, New York College of Osteopathic Medicine, Old Westbury.

<i>Times:</i>	1:00-1:30 PM	Poster set-up.
	1:30-3:00 PM	Authors of even-numbered posters present for questions.
	3:30-5:00 PM	Authors of odd-numbered posters present for questions.
	5:00-5:30 PM	Poster take-down.

1. Complex enamel structure in Primates. M.C. Maas, University of Texas, Austin, Northeastern Ohio Universities, College of Medicine, Rootstown.
2. Crenulated molar enamel in Primates: A functional model. E.R. Dumont, Northeastern Ohio Universities, College of Medicine, Rootstown.
3. Linear enamel hypoplasia in gibbons and other Old World anthropoids: A graded taxonomic pattern in the expression of linear enamel hypoplasia. D. Guatelli-Steinberg, University of Oregon, Eugene.
4. An SEM study of microwear on mandibular molars of Japanese monkeys (*Macaca fuscata*). T. Hojo, University of Occupational & Environmental Health, Kitakyushu, Japan.
5. Transverse tooth movements during mastication in *Pan troglodytes*. P.J. Klein, C.E. Wall, D. Schmitt, Duke University, Durham.
6. Physical properties of *Gorilla g. beringei* foods and implications for masticatory form. A.A. Elgart, Cornell University, Ithaca.
7. Food processing in different social groups of *Alouatta palliata*. M.F. Teaford, N. Yamashita, K. Aldridge, Johns Hopkins University, Baltimore, K.E. Glander, Duke University Primate Center, Durham.
8. An analysis of the dentition of a living wild population of ringtailed lemurs (*Lemur catta*). M.L. Sauther, F.P. Cuzzo, University of Colorado, Boulder, R. W. Sussman, Washington University, St. Louis.
9. Interspecific dental allometry in strepsirrhine primates. T.R. Jackson, Whitney Young High School Chicago Academy of Sciences, Chicago, C.J. Vinyard, Northwestern University, Chicago Academy of Sciences, Chicago.
10. Morphological correlates of gummivory in the skull of prosimian primates. S.H. Williams, C.E. Wall, Duke University, Durham.
11. Jaws and diet among colobines: A biomechanical enigma. W.S. McGraw, New York College of Osteopathic Medicine, D.J. Daegling, Yale University, New Haven.
12. Comparison of paraseptal (vomeronasal) cartilages in adult humans and mouse lemurs. T.A. Buttery, T.D. Smith, A.M. Burrows, Slippery Rock University, M.P. Mooney, M.I. Siegel, University of Pittsburgh.

13. Determinants of the variation of maxillary sinus size in Japanese macaques. T. Koppe, University of Greifswald, Germany, T.C. Rae, University of Durham, UK, S. Marquez, Mount Sinai School of Medicine, New York.
14. Variation in catarrhine ectotympanic development and morphology. J. Warshaw, City University of New York, NYCEP, New York.
15. Morphometric recognition of shape-conservative anatomical complexes. T.M. Cole III, University of Missouri, Kansas City, V.B. DeLeon, S. Lele, J.T. Richtsmeier, Johns Hopkins University, Baltimore.
16. Patterns of craniofacial variability in three savanna baboon groups. K. Aldridge, J.T. Richtsmeier, Johns Hopkins University, Baltimore.
17. Cranial dimorphism in *Cebus capucinus*. T.J. Masterson, James Madison University, Harrisonburg.
18. Patterns of craniometric sexual dimorphism in papionin primates. L.S. Buchanan, S.R. Leigh, University of Illinois, Urbana.
19. Size in *Eulemur fulvus rufus* from western Madagascar: Sexual dimorphism and ecogeographic variation. J.S. Gerson, Duke University, Durham.
20. Size, scaling, and heterochrony in the genus *Papio*. S.J. Lee, L.S. Buchanan, S.R. Leigh, University of Illinois, Urbana.
21. Comparative size at maturity reaction norms in Old and New World monkeys. D. Su, New York University, W.C. Hartwig, Touro University College of Osteopathic Medicine, San Francisco.
22. Comparisons between island and mainland dwelling populations of Mona Monkeys in Africa and the Caribbean. K.J. Bensen, M.E. Glenn, Windward Islands Research and Education Foundation, Bayshore, NY.
23. Geometric motion analysis. D.E. Slice, State University of New York, Stony Brook.
24. The effects of substrate orientation on shoulder and hip angular excursions in *Aotus*. N.J. Stevens, S.G. Larson, State University of New York, Stony Brook.
25. A postural model to explain reduced hip extension in Hadar hominid AL 288-1. J.H. Hunt, Yale University, New Haven, D. Schmitt, Duke University, Durham.

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SESSION 11

FRIDAY, APRIL 30, 1999

SESSION 12

26. Inadequacies of the intermembral index in platyrrhines. L.C. Davis, S.M. Ford, Southern Illinois University, Carbondale.
27. Interpositional and intraspecific variations of primate phalangeal morphology. M. Scalabrin, Southern Illinois University, Carbondale.
28. The function of uncinate processes among primates. N. Milne, C.E. Oxnard, University of Western Australia.
29. Comparisons in linear skeletal dimensions of captive versus wild lowland gorillas. K.A. Nichols, University of Colorado, Boulder.
30. Allometric scaling of articular surface areas in *Papio anubis*. A.D. Gordon, University of Texas, Austin.
31. Accuracy of sex estimation of non-human primates using morphological traits of the pelvis. J.A. Pulley, Arizona State University, Tempe.
32. Mangabey systematics: Implications of reproductive characteristics. S.E. Walker, Humboldt State University, Arcata, CA, L.P. Field, Sacramento Zoo.
33. Asynchrony of estrous swelling in Mahale chimpanzees. A. Matsumoto-Oda, E. Kasuya, Y. Takahata, Kyoto University, Japan.

PLENARY SESSION

DELAWARE, 5:30PM-6:30PM

Fetal Origins of Disease in Later Life. Dr. David J.P. Barker, Director of the MRC Environmental Epidemiology Unit, Southampton General Hospital, UK.

FRIDAY MORNING, APRIL 30, 1999

SESSION 12: FAIRFIELD

PALEOANTHROPOLOGY III: HOMINID SKELETAL ANALYSES. CONTRIBUTED PAPERS.

Chair: W.L. Jungers, State University of New York, Stony Brook.

- 8:00 AM Paradigms and definitions in early hominid locomotion research. K.E. Coffing, University of California, Los Angeles.

- 8:15 Morphometric analysis of hominoid distal femora: An evaluation of the single species hypothesis for Hadar hominids. M.R. Lague, State University New York, Stony Brook.
- 8:30 Knuckle-walking traits retained in the wrist of early hominids. B.G. Richmond, D.S. Strait, George Washington University, Washington, DC.
- 8:45 Limb lengths and missing links: Body proportions in *Australopithecus*. H.M. McHenry, University of California, Davis.
- 9:00 Size matters: Assessing the effect of variation in segment parameters on bipedal locomotor energetics. P.A. Kramer, University of Washington, Seattle.
- 9:15 Femoral neck cross-sectional morphology in South African early hominids. C.B. Ruff, Johns Hopkins University, Baltimore, H.M. McHenry, University of California, Davis, F. Thackeray, Transvaal Museum, Pretoria, South Africa, L.R. Berger, University of the Witwatersrand, Johannesburg, South Africa.
- 9:30 A reconstruction of the Sts 14 pelvis, and the obstetrics of *Australopithecus*. B.A. Rosenman, C.O. Lovejoy, L.B. Spurlock, Kent State University, Kent, R.G. Tague, Louisiana State University, Baton Rouge.
- 9:45 Shock wave transmission through the human body during normal and compliant walking. D. Schmitt, P. Lemelin, A.C. Trueblood, Duke University, Durham.
- 10:00 INTERMISSION
- 10:15 The Olduvai Hominid 8 foot reconsidered: A new architectural analysis. G. Berillon, Institut de Paléontologie Humaine, Paris, France.
- 10:30 An investigation into the degree of hallux abduction of the OH8 foot. W.E.H. Harcourt-Smith, L.C. Aiello, University College London, UK.
- 10:45 Experimental and comparative evidence shows direct cranial-hyolaryngeal relationships in the vertical and horizontal axes: Implications for reconstruction in fossil hominids. J.S. Reidenberg, J.T. Laitman, Mount Sinai School of Medicine, New York.
- 11:00 Brain evolution in gracile australopithecines: Was *A. africanus* the mother of us all? D. Falk, State University of New York, Albany.
- 11:15 Variation in hominid brain size: How much is due to method? C. De Miguel, M. Henneberg, University of Adelaide, Australia.

- 11:30 Evolution of neocortical size and gyrification in hominids: Evidence from comparative neuroanatomy. J.K. Rilling, T.R. Insel, Emory University, Atlanta.
- 11:45 Did Australopithecines have inflated brains? R.L. Holloway, S. Marquez, D. Broadfield, M. Yuan, Columbia University, New York, Mount Sinai School of Medicine, New York.

SESSION 13: UNION DE

GENETICS II AND SKELETAL BIOLOGY II: POPULATION ORIGINS AND EVOLUTION IN THE NEW WORLD. SYMPOSIUM.

Several conflicting hypotheses on New World colonization have been promoted in recent years. The goal of this symposium is to reconcile conflicting points of view by assembling innovative researchers with diverse data and analytical approaches in order to create the broadest possible context for construction of a cohesive theory on New World colonization. Unresolved issues to be addressed include the number of colonizing migrations to the New World, the origin and timing of migrations, and the nature of evolution subsequent to settlement in the New World.

Organizers

and Chairs: C. Kolman, NIH, NIAAA, Bethesda, and J.C. Long, NIH, NIAAA, Bethesda.

- 8:30 AM Native American origins and dispersal: Evidence from mitochondrial DNA. D.A. Merriwether, B. Kemp, J.V. Neel, University of Michigan, Ann Arbor.
- 8:45 Autosomal DNA haplotype diversity within and among Amerind-speaking populations. J.R. Kidd, K.K. Kidd, Yale University, New Haven.
- 9:00 Reevaluating Siberia as a source area for ancestral Native American populations. T.G. Schurr, J.T. Lell, Emory University, Atlanta, R.I. Sukernik, E.B. Starikovskaya, Institute of Cytology and Genetics, Novosibirsk, D.C. Wallace, Emory University, Atlanta.
- 9:15 New World Y chromosome founder haplotypes and the peopling of the Americas. M.F. Hammer, S.L. Zegura, University of Arizona, Tucson, A. Bergen, J.C. Long, NIAAA, NIH, Bethesda, W. Klitz, University of California, Berkeley, R.C. Griffiths, Monash University, Clayton, Australia, A.R. Templeton, Washington University, St. Louis, L.P. Osipova, O.L. Posukh, Institute of Cytology and Genetics, Novosibirsk, Russia, T.M. Karafet, University of Arizona, Tucson, Institute of Cytology and Genetics, Novosibirsk, Russia.
- 9:30 Population profiles of Native American genetic diversity based on pooled DNA samples. J.A. Knowles, Columbia University, New York, M.H. Crawford, J. McComb, University of Kansas, Lawrence, P. Banerjee, Columbia University, New York.

FRIDAY, APRIL 30, 1999

SESSION 13 / SESSION 14

- 9:45 Ancient DNA patterns and the peopling of the Americas. D.H. O'Rourke, S.W. Carlyle, M.G. Hayes, University of Utah, Salt Lake City.
- 10:00 INTERMISSION
- 10:15 The Pleistocene component of the Native American population: A linguistic perspective. J. Nichols, University of California, Berkeley.
- 10:30 Environmental and linguistic evidence relevant to New World colonization. R.A. Rogers, L.A. Rogers, Natural Resources Conservation Service, USDA, Des Moines.
- 10:45 New craniofacial and dental perspectives on Native American origins. J.F. Powell, University of New Mexico, Albuquerque.
- 11:00 DNA marker analysis for evidence of European contributions to Native American gene pools before and after Columbus. J.C. Long, M. Urbanek, F.C. Romero, D. Goldman, NIAAA, NIH, Bethesda.
- 11:15 Archaeology and the human colonization of Siberia, Alaska, and New World: Do stones, bones and genes tell the same story? T. Goebel, University of Nevada, Las Vegas, G.R. Scott, Arizona State University, Tempe.
- 11:30 An American Indian and Health Sciences perspective on the peopling of the Americas. E. Rhoades, University of Oklahoma, Oklahoma City.
- 11:45 Discussion: E. Szathmary, University of Manitoba, Winnipeg, and J.C. Long, NIH, NIAAA, Bethesda.

SESSION 14: MADISON

SKELETAL BIOLOGY III. CONTRIBUTED PAPERS.

- Chair:* M. LaVelle, University of Rhode Island, Kingston.
- 8:00 AM The ontogeny of sexual dimorphism in the hyoid bone. M. Clegg, L.C. Aiello, University College London, UK.
- 8:15 Gonial eversion: It isn't sex. S.R. Loth, University of Pretoria, South Africa, M. Henneberg, University of Adelaide, S. Australia.
- 8:30 Facial growth and sexual dimorphism in some papionin species. P. O'Higgins, M. Collard, University College London, UK.

- 8:45 Allometry and postnatal development of pelvic sexual dimorphism in primates. Y. Li, Johns Hopkins University, Baltimore.
- 9:00 Morphometric variation and sex determination in the human sacrum. P.H. Moore-Jansen, J.H. Plochocki, University of Kansas, Wichita.
- 9:15 Sexual dimorphism of the human lumbar spine. K.K. Whitcome, Southern Illinois University, Carbondale.
- 9:30 Sexual dimorphism in the long bones from a Spanish Medieval ossuary. I. Lopez-Bueis, University of California, Santa Barbara, G. Trancho, Universidad Complutense de Madrid, Spain.
- 9:45 Skeletal growth in modern humans and the African apes. L.T. Humphrey, The Natural History Museum, London, UK.
- 10:00 Craniofacial change in the mature and elderly: A three-dimensional comparison of sexual dimorphism in aging. A.M. Lubensky, J.T. Richtsmeier, Johns Hopkins University, Baltimore.
- 10:15 INTERMISSION
- 10:30 Distinguishing facial morphology in sub-adult skeletal remains from closely related populations. U. Strand Vidarsóttir, University of Durham, UK, P. O'Higgins, University College London, UK, C.B. Stringer, The Natural History Museum, London, UK.
- 10:45 Interpreting growth patterns in juveniles: Current theories for past populations. S.E. King, University of Cambridge, UK, S.J. Uliaszek, University of Oxford, UK.
- 11:00 How reliable are the skeleton indicators for subadult's age at death estimation? A test with the Coimbra Identified Skeletal Collection. E. Cunha, F. Magalhães, A. Abade, Universidade de Coimbra, Portugal.
- 11:15 Reevaluation of component approaches to age estimation from the human pubic symphysis. L.W. Konigsberg, N.P. Herrmann, D.J. Wescott, University of Tennessee, Knoxville.
- 11:30 Are morphological phase indicators of age estimation universal?: Revising the standards for a Bosnian forensic population. T. Simmons, Western Michigan University, Kalamazoo, V. Tuco, R. Kešetović, Z. Cihlarž, Tuzla Clinical Center, Bosnia-Herzegovina.

- 11:45 Developmental changes in the petro-occipital fissure: Implications for age estimation and biomechanical relationships. A.L. Balboni, J.S. Reidenberg, J.T. Laitman, Mount Sinai School of Medicine, New York.

SESSION 15: MORROW

PALEOPATHOLOGY II: CONTACT DYNAMICS IN THE MID-ATLANTIC AND NORTHEAST: A BIOARCHAEOLOGICAL PERSPECTIVE. SYMPOSIUM.

This symposium is the first to focus on the bioarchaeology of European contact and Native population health in the Mid-Atlantic and Northeast, where English, Dutch, French, Iroquois, and Algonquians vied for power, land and resources. The papers presented in this symposium add to the growing body of data on the effects of European contact on Native Americans by focussing on a geographic and cultural region in which little research has been conducted, outside the "Spanish Borderlands." The presentations focus on osteological and paleopathological analyses of skeletal populations. Contact is viewed as a dynamic synergism between disparate groups rather than as an act perpetrated upon passive Native Americans by Europeans. In addition to presenting data relating to health status, papers in this symposium place these data within a diachronic framework in which the prehistoric and historic interaction among Native groups as well as the colonial agenda of Europeans are shown to be contributing factors that shaped Native American responses to contact. Analyses of mortuary patterns and general indicators of diet, disease and stress, integrated with ethnohistorical data, reveal the mosaic of responses shown by Native groups to European intrusion into the Mid-Atlantic and Northeast.

Organizers

and Chairs: E. Miller, California State University, Los Angeles, C.M. Gagnon, University of North Carolina, Chapel Hill, and B.J. Baker, Arizona State University, Tempe.

- 9:00 AM Contact dynamics in the Northeast and Mid-Atlantic: An overview. B.J. Baker, Arizona State University, Tempe.
- 9:15 Contexts for contact biology. R.S. Grumet, National Park Service, Philadelphia.
- 9:30 Skeletal evidence for an early date for European presence in Western New York. L.P. Saunders, Rochester Museum and Science Center, Rochester.
- 9:45 Health, politics, and population movement in the Susquehanna Valley. C.M. Gagnon, University of North Carolina, Chapel Hill.
- 10:00 Temporal trends in morbidity in the Chesapeake Bay area: Part 1. Samples, methodology, and context. F.E. Damann, Louisiana State University, Baton Rouge, E. Miller, California State University, Los Angeles, E.B. Jones, D.H. Ubelaker, Smithsonian Institution, Washington, DC.

- 10:15 INTERMISSION
- 10:30 Temporal trends in morbidity in the Chesapeake Bay area: Part 2. Data and conclusions. E. Miller, California State University, Los Angeles, F.E. Damann, Louisiana State University, Baton Rouge, D.H. Ubelaker, E.B. Jones, Smithsonian Institution, Washington, DC.
- 10:45 Native American interactions in protohistoric Virginia: A bioarchaelogical perspective from the interior. D. Gold, University of Michigan, Ann Arbor.
- 11:00 The epidemiology of treponemal disease in North Carolina and southern Virginia during the 2nd millennium A.D. P.M. Lambert, Utah State University, Logan.
- 11:15 Cultural and biological relationships between two Late Woodland populations on the North Carolina Coastal Plain. A.M. Kakaliouras, University of North Carolina, Chapel Hill, D.L. Hutchinson, East Carolina University, Greenville.
- 11:30 Discussant. C.S. Larsen, University of North Carolina, Chapel Hill.

SESSION 16: FRANKLIN BCD

PRIMATES V: BEHAVIORAL ECOLOGY AND CONSERVATION STATUS OF PRIMATE POPULATIONS IN NICARAGUA. POSTER SYMPOSIUM.

Due to political instability and civil war, little has been published on the ecology and conservation status of primates in Nicaragua for the past 20 years. Beginning in 1997, with the assistance of the Nicaraguan Government, a biological field station was established on Isla de Ometepe, providing an opportunity for in-depth research of the white-faced capuchins (*Cebus capucinus*) and mantled howling monkeys (*Alouatta palliata*) which inhabit the island. This symposium brings together the results of projects recently conducted on diet, demography, locomotor behavior, genetics, parasitology, social interactions, and conservation of howling monkeys on Isla de Ometepe. They are part of an anticipated long-term multidisciplinary field investigation and provide scientific data required to identify how present patterns of land use and deforestation impact on howling monkey demography, reproduction, health, and social behavior. Comparisons with mantled howling monkey populations in other regions will help understand this species' ecological success and adaptability and help to determine future conservation policies.

Organizers

and Chairs: P.A. Garber, University of Illinois, Urbana, and L.A. Winkler, University of Pittsburgh, Titusville.

Times:	8:00-8:30 AM	Poster set-up.
	10:30 AM-12:00 PM	Authors present for questions.
	12:00-12:30 PM	Poster take-down.

1. A preliminary study of mantled howling monkey (*Alouatta palliata*) ecology and conservation on Isla de Ometepe, Nicaragua. P.A. Garber, J.D. Pruetz, A. Lavallee, S. Lavallee, University of Illinois, Urbana.
2. Capture, health, and morphological assessment of free-ranging mantled howling monkeys (*Alouatta palliata*) in Nicaragua. G. Peter, Parke-Davis Research, Ann Arbor, MI, R. Sohn, Wildlife Veterinary Consulting, Salt Lake City, L. Winkler, University of Pittsburgh.
3. Extraction of DNA and PCR analysis of DNA from free-ranging howling monkey (*Alouatta palliata*) feces. X. Zhang, L. Winkler, R. Ferrell, University of Pittsburgh.
4. Assessing intragroup genetic variation of free ranging mantled howling monkeys on the island of Ometepe, Nicaragua. L. Winkler, X. Zhang, R. Ferrell, University of Pittsburgh.
5. Intestinal parasite infections in two groups of mantled howling monkeys (*Alouatta palliata*) on the island of Ometepe, Nicaragua. J.A. Kahre, Whitman College, Walla Walla, WA.
6. Dental morphology of the free-ranging mantled howling monkeys on Isla de Ometepe, Nicaragua, and the Nicaraguan collection at the National Museum of Natural History. G. Carmichael, L. Winkler, University of Pittsburgh, Titusville.
7. Positional behavior and prehensile-tail use in *Alouatta palliata*. M.F. Bezanson, University of Arizona, Tucson.
8. Activity budget, diet, and patterns of resource utilization of the mantled howling monkey (*Alouatta palliata*) in Ometepe, Nicaragua. C.D. Travers, State University of New York, Stony Brook.
9. Interactions between mantled howling monkeys (*Alouatta palliata*) and neotropical birds in a fragmented forest habitat on Ometepe Island, Nicaragua. F. Huettmann, University of New Brunswick, Fredericton, NB.
10. Mother and infant interactions and infant and nonmother interactions in mantled howling monkeys, *Alouatta palliata*, from the La Suerte Biological Field Station, Costa Rica and the Ometepe Biological Field Station, Nicaragua. B.N. Torgimson, University of Wisconsin, Stevens Point.
11. Shifting social dynamics in a group of mantled howling monkeys (*A. palliata*) on the Island of Ometepe, Nicaragua. S.Z. Goldsmith, University of Wisconsin, Milwaukee, L. Winkler, University of Pittsburgh, Titusville.

12. Ethnobiology by Mayangna Indians in Bosawas Reserve, Nicaragua: An example of community directed conservation. J.C. Merriam, Idaho State University, Pocatello.

SESSION 17: FRANKLIN BCD

PRIMATES VI: PRIMATE BEHAVIOR AND ECOLOGY. POSTERS.

Chairs: S. Boinski, University of Florida, Gainesville, and J.E. Lambert, Southwest Missouri State University, Springfield.

<i>Times:</i>	8:00-8:30 AM	Poster set-up.
	8:30-10:00 AM	Authors of even-numbered posters present for questions.
	10:30 AM-12:00 PM	Authors of odd-numbered posters present for questions.
	12:00-12:30 PM	Poster take-down.

13. Patterns of affiliative grouping behavior, aggression, and reconciliation in rhesus (*Macaca mulatta*) and pigtailed monkeys (*M. nemestrina*). H.A. Piolet, M.R. Clarke, Tulane University, New Orleans.
14. Female dominance in blue-eyed black lemurs (*Eulemur macaco flavifrons*) at the Duke University Primate Center. L.J. Digby, Duke University, Durham, S.M. Kahlenberg, Ohio Wesleyan University, Delaware.
15. Sociosexual behavior of captive adult pygmy marmoset daughters before and after their mothers' deaths. L.B. Spurlock, M.A. Norconk, Kent State University, Kent.
16. Female-female inspections in muriquis (*Brachyteles arachnoides*). D.N. Hawkins, K.B. Strier, University of Wisconsin, Madison.
17. Early behavioral development in a wild white-faced saki monkey (*Pithecia pithecia*). J.A. Brush, M.A. Norconk, Kent State University, Kent.
18. *Cercopithecus mona* all-male groups: A new phenomenon in the *Cercopithecus* genus? M.E. Glenn, K.J. Bensen, Windward Islands Research and Education Foundation, Bayshore, NY.
19. Differences in adult male-juvenile interactions with regard to relatedness in *Propithecus diadema edwardsi*. R.G. Seltzer, Kent State University, Kent.
20. Effects of populations density on primate community structure. K.E. Reed, Arizona State University, Tempe.

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SESSION 17

21. The effects of postural regulation on the hand-use patterns of free-ranging white-faced capuchins (*Cebus capucinus*) in Panama. M.A. Panger, University of California, Berkeley, L.D. Wolfe, East Carolina University, Greenville.
22. Ecological aspects of locomotion: Modern hominoids across continents. K.B. Johnson, Southern Illinois University, Carbondale.
23. Laterality of hand function in the naturalistically-housed chimpanzees of Chester Zoo, U.K. J.A. Weghorst, Washington University, St. Louis, MO, A.W. Fletcher, Miami University, Oxford, OH.
24. Cheek pouch use in *Papio cynocephalus*. J.C. Whitham, University of Illinois, Urbana, J.E. Lambert, Southwest Missouri State University, Springfield.
25. Oral tool use among captive orangutans (*Pongo pygmaeus*). R.C. O'Malley, W.C. McGrew, Miami University, Oxford, OH.
26. Plant choice in the construction of night nests by mountain gorillas in Bwindi Impenetrable Forest, Uganda. J. Rothman, Cornell University, Ithaca, G. Mayooba, Institute of Tropical Forest Conservation, Kabale, Uganda, E. Dierenfeld, Wildlife Conservation Society, Bronx, E. Rodriguez, Cornell University, Ithaca.
27. A field method for the assessment of gonadal, adrenal, and ovarian function in baboons using fecal steroid analysis. J.C. Beehner, J.E. Phillips-Conroy, T.J. Bergman, Washington University, St. Louis, C.J. Jolly, New York University, P.L. Whitten, Emory University, Atlanta.
28. Evaluation of an enriched physical environment: Space and structure utilization in *Pan troglodytes*. S. Tecot, University of Texas, Austin, M.L. Jensvold, R. Fouts, Chimpanzee and Human Communications Institute, Ellensburg, WA.
29. Measuring seed dispersal distance with genetic markers: Preliminary results. B.W. Grafton, J.V. Freudenstein, M.A. Norconk, Kent State University, Kent.
30. The systematic use of video as a data collection and training tool in free-ranging, semi-free ranging, and captive studies of nonhuman primates. G.R. Goldstein, A. Fuentes, D. Snively, Central Washington University, Ellensburg.

FRIDAY AFTERNOON, APRIL 30, 1999

LUNCHEON

HAYES, 12:00-2:00PM

Luncheon talk: *Challenges and Opportunities for Funding Physical Anthropology in the 21st Century*, Dr. Bennett Bertenthal, Social, Behavioral and Economic Sciences, NSF.

SESSION 18: FAIRFIELD

PALEOANTHROPOLOGY IV: PRIMATE EVOLUTION. CONTRIBUTED PAPERS.

- Chair:* S.M. Ford, Southern Illinois University, Carbondale.
- 2:00 PM The phylogenetic significance of new *Copelemur* material from early Eocene beds of the Washakie Basin, Wyoming. F.P. Cuzzo, H.H. Covert, University of Colorado, Boulder.
- 2:15 A new genus and species of the diverse New Mexico lemurs. J.W. Froehlich, D.J. Froehlich, A. Schmiedicke, University of New Mexico, Albuquerque.
- 2:30 Phylogenetic relationships and paleoecological adaptations of a new bushbaby from the middle Miocene of Kenya. M.L. McCrossin, Southern Illinois University, Carbondale.
- 2:45 New generic designations for the African galagos based on morphological and molecular data. J.C. Masters, Natal Museum, Pietermaritzburg, South Africa, M. Delpero, Università di Torino, Italy.
- 3:00 Lemur biogeography: Lessons from Madagascar's subfossil past. L.R. Godfrey, University of Massachusetts, Amherst, W.L. Jungers, State University of New York, Stony Brook, E.L. Simons, P.J. Chatrath, Duke University Primate Center, Durham, B. Rakotosamimanana, Université d'Antananarivo, Madagascar.
- 3:15 Brain size and body size in subfossil Malagasy lemurs. W.L. Jungers, State University of New York, Stony Brook.
- 3:30 Omomyid primates from South Pass (middle Eocene, southwestern Wyoming): Diversity, anachronism, and the origin of new species. G.F. Gunnell, University of Michigan, Ann Arbor, E.R. Miller, University of North Carolina, Chapel Hill.
- 3:45 Skull of *Omomys carteri*, an Eocene omomyid primate. J.P. Alexander, R.D.E. MacPhee, American Museum of Natural History, New York.
- 4:00 INTERMISSION
- 4:15 The nasal fossa of *Rooneyia viejaensis* as revealed by high-resolution X-ray computed tomography. E.R. Seiffert, J. Kappelman, T.M. Ryan, University of Texas, Austin.
- 4:30 New *Amphipithecus* from the middle Eocene of Myanmar: Implications for stem anthropoid origins. R.L. Ciochon, University of Iowa, Iowa City, P.A. Holroyd,

University of California, Berkeley, T. Thein, University of Taunggyi, Southern Shan State, Myanmar.

- 4:45 Mandibular evidence bearing on the phylogenetic position of *Victoriapithecus* and its relationship to *Prohylobates*. B.R. Benefit, Southern Illinois University, Carbondale.
- 5:00 Was *Kenyapithecus africanus* a sclerocarp feeder? An exploration of the dietary adaptations of a middle Miocene hominoid through anterior dental microwear analysis. A.K. Palmer, B.R. Benefit, M.L. McCrossin, Southern Illinois University, Carbondale.
- 5:15 Estimates of cranial capacity and encephalization in *Proconsul* and *Turkanapithecus*. J. Manser, T. Harrison, New York University.
- 5:30 Femora of *Anapithecus* from Rudabánya. L. Kordos, The Geological Museum of Hungary, Budapest, D.R. Begun, University of Toronto, ON.
- 5:45 Rethinking the positional repertoire of *Oreopithecus*. R.E. Wunderlich, A. Walker, Pennsylvania State University, University Park, W.L. Jungers, State University of New York, Stony Brook.

SESSION 19: MORROW

PRIMATES VII: A REVISION OF THE GENUS GORILLA: SEVENTY YEARS AFTER COOLIDGE. SYMPOSIUM.

The year 1999 marks the 70th anniversary of Harold Coolidge's publication "A Revision of the Genus *Gorilla*." Mounting evidence from studies of behavioral ecology, morphology, and genetics suggests that the western lowland, eastern lowland, and mountain gorillas differ more than has been previously accepted. Thus the past decade has witnessed a shift away from studies of single taxa towards more comprehensive comparisons among the various subspecies. The purpose of this symposium is to provide the scientific community with a contemporary and coherent picture of the state of our knowledge of the genus *Gorilla* as evidenced by the most recent data on ecology, morphology, behavior, and genetics.

Organizers

and Chairs: A.B. Taylor, Samuel Merritt College, Oakland, CA, and M.L. Goldsmith, Tufts University, Grafton, MA.

- 2:00 PM Introduction (no abstract). A.B. Taylor, Samuel Merritt College, Oakland.
- 2:15 Masticatory form and diet in the western lowland (*Gorilla gorilla gorilla*) and eastern lowland (*G.g. graueri*) gorillas. A.B. Taylor, Samuel Merritt College, Oakland.

- 2:30 Comparative ontogenetic morphology of the hand among subspecies of *Gorilla* and species of *Pan*. S.E. Inouye, Ohio University, Athens.
- 2:45 Craniometric discrete trait variation in *Gorilla gorilla*. P.B. Park, S.R. Leigh, University of Illinois, Urbana, L.W. Konigsberg, University of Tennessee, Knoxville.
- 3:00 New findings on the distinctive gorillas of the Nigeria-Cameroon border region. J.F. Oates, K.L. McFarland, City University of New York, R.M. Stumpf, J.G. Fleagle, State University of New York, Stony Brook, T.R. Disotell, New York University.
- 3:15 Gorilla behavioral ecology: Effects of altitudinal changes on highland/lowland populations. M.L. Goldsmith, Tufts University, Grafton, J.B. Nkurunungi, Makerere University, Kampala, Uganda, C.B. Stanford, University of Southern California, Los Angeles.
- 3:30 Short discussion.
- 3:45 INTERMISSION
- 4:00 Nutritional aspects of diet of gorillas at Bai Hokou, Central African Republic with inter-population and interspecific comparisons. M.J. Remis, Purdue University, West Lafayette.
- 4:15 Diet of western lowland gorillas in south-west Central African republic: Implications for subspecific variation in gorilla grouping and ranging patterns. D. Doran, State University of New York, Stony Brook, A. McNeillage, Wildlife Conservation Society, Bronx.
- 4:30 Non-invasive molecular genetic studies of gorillas: Evolutionary and systematic implications. O.A. Ryder, K.J. Garner, W. Burrows, Zoological Society of San Diego.
- 4:45 Incongruence between mitochondrial and nuclear DNA estimates of divergence between *Gorilla* subspecies. M.I. Seaman, A.S. Deinard, K.K. Kidd, Yale University, New Haven.
- 5:00 Gorillas, guerillas, bugs and bushmeat: The current status of gorillas and threats to their existence. A. Plumptre, A. McNeillage, J. Hall, Wildlife Conservation Society, Bronx.
- 5:15 Summation. M.L. Goldsmith, Tufts University, Grafton.
- 5:30 Discussion.

SESSION 20: MADISON

HUMAN BIOLOGY IV: ADAPTATION. CONTRIBUTED PAPERS.

- Chair:* R.A. Halberstein, University of Miami, Coral Gables.
- 2:00 PM Anthropometric variation in Native Americans from California. P.C. Dillingham, University of Tennessee, Knoxville.
- 2:15 Climate and body form in Australian Aborigines. P.A. Lindsell, University of New England, Armidale, Australia.
- 2:30 A case for reduced skin sensation in high latitude prehistoric Polynesians. G. J. Dias, E.P. Visser, University of Otago, Dunedin, New Zealand.
- 2:45 The evolution of human skin pigmentation. N.G. Jablonski, G. Chaplin, California Academy of Sciences, San Francisco.
- 3:00 Skin color as an index of timing in human evolution. C.L. Brace, University of Michigan, Ann Arbor, M. Henneberg, University of Adelaide, South Australia, J.H. Relethford, State University of New York, Oneonta.
- 3:15 Dawkins revisited: A reintroduction of multilevel selection theory to the anthropological sciences. K.M. Kniffin, D.S. Wilson, State University of New York, Binghamton.
- 3:30 Comparative ecology of human sleep. C.M. Worthman, Emory University, Atlanta.
- 3:45 INTERMISSION
- 4:00 Sleep behavior and activity patterns in pre-teen and adolescent girls residing in suburban Seattle. D.E. Schechter, University of Washington, Seattle.
- 4:15 Hormonal and anthropometric markers of lifestyle in Nepali and Ethiopian children. C. Panter-Brick, H. Dobrowolska, R. Drewett, University of Durham, UK.
- 4:30 Oxygen saturation and the response to sub-maximal exercise among Tibetans at 3900m. C.M. Beall, Case Western Reserve University, Cleveland, C.M. Worthman, J. Stallings, Emory University, Atlanta.
- 4:45 Relationships between prefrontal volume and behavior in normal human females. P.T. Schoenemann, University of Pennsylvania, Philadelphia.

- 5:00 Morphological variation in the upper respiratory tract and airflow dynamics. S.E. Churchill, L.L. Shackelford, J.N. Georgi, M.T. Black, Duke University, Durham.
- 5:15 Nasal valve function and location as determined by *in vitro* fluid flow studies. J.N. Georgi, S.E. Churchill, L.L. Shackelford, M.T. Black, Duke University, Durham.
- 5:30 Remembering Malthus: Making the case for a significant reduction in global human numbers. J.K. Smail, Kenyon College, Gambier, OH.

SESSION 21: UNION DE

PALEOPATHOLOGY III: HEALTH AND DISEASE IN INFANCY FROM PREHISTORY TO EARLY MODERN TIMES. SYMPOSIUM.

The results of paleopathological research provide insights into the etiology and the epidemiology of some infectious and deficiency diseases as well as into the everyday life of earlier agricultural and urban populations, particularly with respect to the care of newborns and infants. Thus, the nature and frequency of childhood diseases are reliable indicators of the health and the quality of life of a population. This symposium informs on evolution and the history of diseases, the shifting of symptoms over long time periods, and whether there was any change in the health situation of prehistoric and early historic populations. Furthermore, the correlation between environment, morbidity and mortality is demonstrated.

Organizer

and Chair: M. Schultz, University of Göttingen, Germany.

- 2:00 PM Introduction (no abstract). M. Schultz, University of Göttingen, Germany.
- 2:15 Ancient DNA diagnosis of bone pathology in infancy and early childhood. M. Faerman, Hebrew University, Jerusalem, Israel.
- 2:30 Congenital and early developmental defects of the skeleton: Their identification and significance in Native North Americans. C.F. Merbs, Arizona State University, Tempe.
- 2:45 Scurvy: Its skeletal manifestations and prevalence in North and South American skeletal samples. D.J. Ortner, Smithsonian Institution, Washington, DC.
- 3:00 Meningeal diseases in infancy from prehistory to Early Modern Times. M. Schultz, University of Göttingen, Germany.
- 3:15 The child victims of the plague epidemics of 1590, 1721, and 1722 in southeastern France. O. Dutour, M. Signoli, S. Bello, Gy. Pálfi, Université de la Méditerranée, Marseille, France.

- 3:30 Infant diseases in central Europe during the Neolithic. P. Carli-Thiele, M. Schultz, University of Göttingen, Germany.
- 3:45 Infant diseases in Central Europe and the Near East during the Bronze Age. W.-R. Teegen, Office of the State Archaeologist of Saxony-Anhalt, Halle, Germany, M. Schultz, T.H. Schmidt-Schultz, University of Göttingen, Germany.
- 4:00 INTERMISSION
- 4:15 Infant diseases in central Europe during the Early Middle Ages. K. Kreutz, University of Giessen, Germany, G. Teichmann, M. Schultz, University of Göttingen, Germany.
- 4:30 Infant diseases in eastern Europe during the Late Middle Ages and Early Modern Times. R. Jankauskas, University of Vilnius, Lithuania, M. Schultz, University of Göttingen, Germany.
- 4:45 Infant diseases in pre-Columbian North American Southwest: The Anasazi population from Paa-ko. R. Tyson, San Diego Museum of Man, M. Schultz, T.H. Schmidt-Schultz, University of Göttingen, Germany.
- 5:00 Infant diseases in pre-Columbian North American Southeast: The Late Woodland and Mississippian populations from the Piedmont of Virginia and North Carolina. C.S. Larsen, University of North Carolina, Chapel Hill, M. Schultz, T.H. Schmidt-Schultz, University of Göttingen, Germany, P.M. Lambert, Utah State University, Logan.
- 5:15 Infant diseases in pre-Columbian Mexico: The urban population from La Ventilla-Teotihuacán. C.M. Pijoan Aguade, Museo Nacional de Antropología e Historia, México, M. Schultz, T.H. Schmidt-Schultz, University of Göttingen, Germany, J. Mansilla Lory, Museo Nacional de Antropología e Historia, México.
- 5:30 Infant diseases in early Colonial times in Mexico: The Spanish population from San Jeronimo, Mexico City. J. Mansilla, Instituto Nacional de Antropología e Historia, México, M. Schultz, University of Göttingen, Germany.
- 5:45 Discussant. P.L. Walker, University of California, Santa Barbara.

SESSION 22: FRANKLIN BCD

PALEOANTHROPOLOGY V: POSTERS.

Chair: J.K. McKee, Ohio State University, Columbus.

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| Times: | 2:00-2:30 PM | Poster set-up. |
| | 2:30-4:00 PM | Authors of even-numbered posters present for questions. |
| | 4:00-5:30 PM | Authors of odd-numbered posters present for questions. |
| | 5:30-6:00 PM | Poster take-down. |
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1. A computer program for delivering virtual multimedia examinations across secure networks and the web. J. Kappelman, A. Gordon, University of Texas, Austin, D. Johnson, University of Texas, Austin, Duke University, Durham, T. Ryan, R. Scott, E. Seiffert, University of Texas, Austin.
 2. Fossil elephant diversity and environmental change in the African Neogene. N.E. Todd, Manhattanville College, Purchase, NY.
 3. Biogeography of Pliocene and Pleistocene African large mammals and faunal dating of southern African hominids. J.K. McKee, Ohio State University, Columbus.
 4. The landscape distribution of larger mammal taxa in eastern Lowermost Bed II, Olduvai Gorge, Tanzania. A.E. Cushing, R.J. Blumenshine, Rutgers University, New Brunswick.
 5. Establishing resolution in paleohabitat reconstructions with relevance to hominid adaptations. S.R. Copeland, Rutgers University, New Brunswick.
 6. Evolutionary implications of hominoid upper-limb proportions. M.S. Drapeau, University of Missouri, Columbia.
 7. Articular scaling in the hominoid talocrural joint: The compromise between body size and locomotion. M. Kriz, Miami University, Oxford, OH, Cleveland Museum of Natural History.
 8. Chimpanzees as an outgroup for the examination of human phylogeny. E.D. Shields, McGill University, Montreal, QC.
 9. Axial rotation in the lumbar vertebral column of *Australopithecus africanus*. M. Cartmill, D. Schmitt, Duke University, Durham.
 10. Estimation of sexual dimorphism in fossil species including *Australopithecus afarensis*: A new technique and tests of its accuracy using extant hominoids. P.L. Reno, C.O. Lovejoy, Kent State University, Kent, K.F. Kern, Bowling Green State University, Bowling Green, S.W. Simpson, Case Western Reserve University, Cleveland, R.S. Meindl, Kent State University, Kent.

11. A comparative study of the size and shape of the Taung Child: An immature *Australopithecus africanus*. P.S. Kyauka, Modesto College, Modesto.
12. A preliminary study of molar occlusal relief in *Australopithecus africanus* and *Paranthropus robustus*. P.S. Ungar, University of Arkansas, Fayetteville, M.F. Teaford, Johns Hopkins University, Baltimore, F.E. Grine, State University of New York, Stony Brook.
13. Is the carotid canal a reliable predictor of cranial capacity in great apes and humans? C. Sherwood, Columbia University, NYCEP, P.J. Gannon, Mount Sinai School of Medicine, NYCEP, R.L. Holloway, Columbia University, NYCEP.
14. How we can eat and speak: Hyoid movements in speech and feeding are different. K.M. Hiiemae, S.W. Medicis, Syracuse University, J.B. Palmer, Johns Hopkins University, Baltimore, B.S. Jackson, J. Hegener, Syracuse University.
15. Primate brain "language" area evolution: Anatomy of Heschl's gyrus and planum temporale in hominids, hylobatids and macaques and of planum parietale in *Pan troglodytes*. P.J. Gannon, N.M. Kheck, Mount Sinai School of Medicine, New York.
16. The brain-face interface: Does brain size correlate with facial dimensions in *Homo* and *Pan*? D. Broadfield, Mount Sinai School of Medicine, City University of New York, K. Mowbray, Rutgers University, New Brunswick, S. Marquez, J.T. Laitman, Mount Sinai School of Medicine, City University of New York, R.L. Holloway, Columbia University.
17. Early hominid brain evolution: New reconstructions of endocasts. J. Guyer, State University of New York, Albany.
18. The Early-Middle Pleistocene *Homo*-bearing succession of Buia (Eritrea). L. Rook, G. Ficcarelli, D. Torre, University of Florence, Italy, R.J. Clarke, University of the Witwatersrand, Johannesburg, South Africa, R. Macchiarelli, National Prehistoric Ethnographic "L. Pigorini" Museum, Rome, Italy, B. Tesfamariam, J. Liebeskal, National Museum of Asmara, Eritrea.
19. The Fontéchevade Fossils: A reanalysis of their archaeological context based on new excavations. S.P. McPherron, Bishop Museum, Honolulu, P.G. Chase, University of Pennsylvania Museum, Philadelphia, A. Debénath, University of Perpignan, H.L. Dibble, University of Pennsylvania, Philadelphia, B.B. Ellwood, University of Texas, Arlington.
20. Comparison of subsistence strategies of Neandertal and modern human populations using faunal analysis. J.L. Fish, Arizona State University, Tempe.

21. Paleoclimate at Amud Cave, Israel: Stable isotope analysis of tooth enamel carbonate. K.A. Hallin, University of Wisconsin, Madison, H.P. Schwarcz, McMaster University, Hamilton, ON, E. Hovers, Harvard University, Cambridge, R. Rabinovich, Hebrew University, Jerusalem, Israel, M.J. Schoeninger, University of Wisconsin, Madison.
22. Three-dimensional analysis of modern human and Neandertal craniofacial growth patterns. G.E. Krovitz, Johns Hopkins University, Baltimore.
23. A re-examination of a proposed Neandertal maxilla from Ksar 'Akil Rock Shelter, Antelias, Lebanon. M.C. Metni, Kent State University, Kent.
24. A structural study of the neandertal face. M. Murphy, M. Glantz, M. Chang, University of Pennsylvania, Philadelphia, S. Athreya, Washington University, St. Louis.
25. Variation in Neandertal internal nasal morphology: Evidence from Krapina and Vindija. T.R. Yokley, Northern Illinois University, DeKalb.
26. "Levantines and Londoners," Part II: Is the cranial variation in the Levant hominids just too much? S.-H. Lee, University of Michigan, Ann Arbor.
27. A new look at some old teeth: An analysis of non-metric dental traits in Neandertals and Old World modern humans. S.E. Bailey, C.G. Turner II, Arizona State University, Tempe.
28. A re-examination of the anterior dental loading hypothesis. M. Glantz, M. Murphy, M. Chang, University of Pennsylvania, Philadelphia, S. Athreya, Washington University, St. Louis.
29. Neandertal mandibular morphology: Autapomorphic complex or intraspecific variant? S. Dobson, University of Michigan, Ann Arbor.
30. How do Neandertal and modern human infants become Neandertal and modern human adults? F.L. Williams, University of Massachusetts, Amherst.
31. The hypoglossal canal: Making silent skulls speak? D. DeGusta, W.H. Gilbert, S.P. Turner, University of California, Berkeley.
32. A photogrammetric analysis of the metacarpal 1 base of Late Pleistocene and recent (Holocene) humans. W.A. Niewoehner, University of New Mexico, Albuquerque.

SESSION 23: FRANKLIN BCD

GENETICS III: GENETICS AND EVOLUTION. POSTERS.

Chair: M. D. Shriver, Allegheny University of the Health Sciences, Pittsburgh.

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| Times: | 2:00-2:30 PM | Poster set-up. |
| | 2:30-4:00 PM | Authors of even-numbered posters present for questions. |
| | 4:00-5:30 PM | Authors of odd-numbered posters present for questions. |
| | 5:30-6:00 PM | Poster take-down. |
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33. Population genetic studies of Athabascan speaking populations in the American Southwest. F.C. Romero, NIH/NIAAA, Bethesda, University of New Mexico, Albuquerque, M. Urbanek, NIH/NIAAA, Bethesda, University of Pennsylvania, Philadelphia, D. Goldman, J.C. Long, NIH/NIAAA, Bethesda.
 34. Estimating non-Indian genetic admixture in American Indians. Y.-F. Chen, R.C. Williams, Arizona State University, Tempe.
 35. Human population relationships as assessed via DNA and protein markers. J. McComb, M.H. Crawford, University of Kansas, Lawrence.
 36. Use of arbitrary-primed PCR (AP-PCR) oligonucleotide motifs for genomic and phylogenetic analyses of human and non-human primates. E.J. Devor, Integrated DNA Technologies, Coralville, IA.
 37. Subtracting human genomes using Representational Difference Analysis (RDA). E.J. Parra, M.D. Shriver, Allegheny University of the Health Sciences, Pittsburgh.
 38. Y chromosome polymorphisms in Chinese ethnic populations. T.M. Karafet, University of Arizona, Tucson, Institute of Cytology and Genetics, Novosibirsk, Russia, L.P. Xu, R.F. Du, Chinese Academy of Sciences, Beijing, P.R. China, W. Wang, City University of Hong Kong Kowloon, Hong Kong, S. Feng, Nankai University, Tianjin, P.R. China, M.F. Hammer, University of Arizona, Tucson.
 39. Distributional patterns and origins of European Y chromosome haplotypes. E.T. Wood-Pavicich, M.R. Bonner, T. Karafet, University of Arizona, Tucson, A.S. Santachiara-Benerecetti, Università degli Studi di Pavia, Italy, B. Bonne-Tamir, Sacler School of Medicine, Ramat Aviv, Israel, M.F. Hammer, University of Arizona, Tucson.
 40. Mitochondrial DNA variation in China. C. Zhang, D.A. Merriwether, University of Michigan, Ann Arbor.

41. DNA diagnosis of thalassemia from ancient Italian skeletons. D.Y. Yang, McMaster University, Hamilton, ON, L. Bondioli, R. Macchiarelli, "L. Pigorini" National Museum of Prehistory and Ethnography, Rome, Italy, B. Eng, J.S. Wayne, S.R. Saunders, McMaster University, Hamilton, ON.
42. Analysis of polymorphic nuclear markers in DNA extracted from archived Native American hair shafts. L.E. Flournoy, University of Tennessee, Knoxville.
43. Sickle cell haplotypes of the African American "Gullah" of the South Carolina Sea Islands. N.L. Rogers, University of Tennessee, Knoxville, G. Argyropoulos, W.T. Garvey, Medical University of South Carolina, Charleston.
44. Genetic and environmental contributions to hematological variation in pedigreed baboons. M. C. Mahaney, S.A. Czerwinski, D.E. Newman, C.L. Snider, Southwest Foundation for Biomedical Research, San Antonio.
45. A possible case of MHC heterozygote advantage in a baboon hybrid zone. S. Suarez, T. Woolley-Barker, C.J. Jolly, T.R. Disotell, NYCEP, New York University, J.E. Phillips-Conroy, Washington University, St. Louis, T.K. Newman, Southwest Foundation for Biomedical Research, San Antonio.
46. Areas of genetic endemism (AGE) in Southeast Asian primates. J.C. Morales, D.J. Melnick, M.R.J. Forstner, L.L. Rosenblum, B.J. Evans, A.J. Tosi, Columbia University, W. Wang, Kunming Institute of Zoology, N. Andayani, J. Supriatna, University of Indonesia, M. Nordin, University of Kebangsaan, Malaysia.
47. Morphological characteristics and developmental processes of aneuploidy. J.T. Richtsmeier, L.L. Baxter, R.H. Reeves, Johns Hopkins University, Baltimore.
48. A craniometric test of three models for the origins of Bronze Age North Bactrians. B.E. Hemphill, Vanderbilt University, Nashville.
49. Morphological integration of craniofacial and dental dimensions in North American and Australian Aboriginal populations. L.A.P. Kohn, Washington University, St. Louis, R.H. Osborne, University of Wisconsin, Madison, G. Townsend, University of Adelaide, Australia.
50. Anthropometric variation in North-Central Mexico. A.F. Christensen, Augusta State University, Augusta.
51. Do genes for body weight also influence bone mineral density? S.A. Czerwinski, M.C. Mahaney, J. Blangero, J. Rogers, Southwest Foundation for Biomedical Research, San Antonio.

FRIDAY, APRIL 30, 1999
SATURDAY, MAY 1, 1999

SESSION 23
SESSION 24

52. Genetics of subcutaneous fat deposition before and after puberty. B. Towne, E.W. Demerath, R.M. Siervogel, Wright State University School of Medicine, Dayton.

SATURDAY MORNING, MAY 1, 1999

SESSION 24: FAIRFIELD

*PALEOANTHROPOLOGY VI: TAXONOMY, PHYLOGENY, NATURAL SELECTION.
CONTRIBUTED PAPERS.*

Chair: D.E. Lieberman, George Washington University, Washington, DC.

- 8:15 AM Biogeographic implications of early hominid phylogeny. D.S. Strait, B.A. Wood, George Washington University, Washington, DC.
- 8:30 Variation and temporal trends in the mandibles and dentition of *Australopithecus afarensis*. C.A. Lockwood, W.H. Kimbel, D.C. Johanson, Arizona State University, Tempe.
- 8:45 Assessing the taxonomic significance of mandibular variation in *Paranthropus boisei*. N.J. Silverman, B.G. Richmond, B.A. Wood, George Washington University Washington, DC.
- 9:00 Patterns of craniofacial variability in living primates and *P. boisei*. B.A. Wood, D.E. Lieberman, The George Washington University, Washington, DC.
- 9:15 The palate of KNM-WT 17000: New data about its skeletal maturation? B. Maureille, J. Braga, UMR 5809 CNRS, Université Bordeaux I, France.
- 9:30 Stratigraphic consistency in hominin phylogeny. M. Collard, University College London, UK, C.A. Lockwood, Arizona State University, Tempe, B.A. Wood, George Washington University, Washington, DC.
- 9:45 Reinvestigating the number of hominid species in Sterkfontein Member 4. J.M. Calcagno, Loyola University, Chicago, D.A. Cope, College of Charleston, M.G. Lacy, Colorado State University, Fort Collins, J. Moggi-Cecchi, P.V. Tobias, University of the Witwatersrand, Johannesburg, South Africa.
- 10:00 INTERMISSION
- 10:15 The Taung child: A re-assessment of its age at death from skull base maturation evidence. J. Braga, P. Murail, UMR 5809 CNRS, Université Bordeaux I, France.

SATURDAY, MAY 1, 1999

SESSION 24 / SESSION 25

- 10:30 Phylogenetic relationships of the Kromdraai hominid sample. K.A. Kaszycka, Adam Mickiewicz University, Poznań, Poland.
- 10:45 Shape analysis of *Australopithecus* molars from Sterkfontein, South Africa. L.J. Hlusko, Pennsylvania State University, University Park.
- 11:00 Description of the Gondolin teeth: Hyper-robust hominids in South Africa? K.L. Kuykendall, University of the Witwatersrand, Johannesburg, South Africa, G.C. Conroy, Washington University, St. Louis.
- 11:15 An ecomorphological model of the initial hominid dispersal from Africa. W.R. Leonard, Northwestern University, Evanston, S.C. Antón, University of Florida, Gainesville, M.L. Robertson, Northwestern University, Evanston.
- 11:30 Can natural selection act on variations in group-adaptations such as language use? S. Ragir, City University of New York.
- 11:45 Environments of natural selection in early Pleistocene *Homo*. R. Potts, Smithsonian Institution, Washington, DC.

SESSION 25: UNION DE

HUMAN BIOLOGY V: CURRENT PERSPECTIVES IN HUMAN BIOLOGY AMONG TROPICAL POPULATIONS OF LATIN AMERICA. SYMPOSIUM.

This symposium is designed to develop a more complete understanding of relationships between environment and human populations inhabiting tropical regions of Latin America. As a result of worldwide economic and political changes, ecological, cultural, and biological changes are occurring rapidly in these regions. Research results from tropical populations in South America provide needed information on human adaptation in response to environmental and cultural change. However, few symposia have addressed adaptation of populations in tropical environments at the annual meetings. Given the amount of research being conducted in tropical environments the time is right to coordinate our efforts and bring interested researchers together to share their data, methods, and ideas.

Organizers

and Chairs: H.P. Silva and L.J. Fitton, Ohio State University, Columbus.

- 9:00 AM Introductory comments (no abstract). D.E. Crews, Ohio State University, Columbus.
- 9:15 A comparison of the anthropometric indices of nutritional status in Tukanoan and Achuar Amerindians. C.M. Orr, D.L. Dufour, J.Q. Patton, University of Colorado, Boulder.

SATURDAY, MAY 1, 1999

SESSION 25 / SESSION 26

- 9:30 Selection for a toxic staple crop: Meeting nutritional requirements in a blackwater basin of Northwest Amazonia. W.M. Wilson, D.L. Dufour, University of Colorado, Boulder.
- 9:45 Coping with exclusion and inclusion: *Ribeirinhos* of the Amazon estuary. S. Nugent, Goldsmiths University of London, Institute of Latin American Studies, UK.
- 10:00 Bioanthropological aspects of ecologically diverse Amazonian peasant populations. H.P. Silva, Ohio State University, Columbus.
- 10:15 INTERMISSION
- 10:30 The nutritional ecology of the Amazonian floodplains: Beyond the varzea/terra firme dichotomy. R.S.S. Murrieta, University of Colorado, Boulder.
- 10:45 Genetic epidemiological approaches to understanding the determinants of susceptibility to Chagas' disease in rural Brazil. S. Williams-Blangero, J.L. Vandeberg, J. Blangero, Southwest Foundation for Biomedical Research, San Antonio, A.R.L. Teixeira, University of Brasilia, Brazil.
- 11:00 Biocultural correlates of health among the Cofan of Ecuador. L. J. Fitton, Ohio State University, Columbus.
- 11:15 The hidden contribution: Genetic and demographic evidence of Amerindian admixture in Uruguayan populations. M. Sans, C. Bonilla, I. Barreto, University of the Republic, Montevideo, Uruguay, G. Cavazos, D.A. Merriwether, University of Michigan, Ann Arbor.
- 11:30 Discussant. F. Salzano, Universidade Federal do Rio Grande do Sul, Brazil.

SESSION 26: MADISON

DENTAL ANTHROPOLOGY I. CONTRIBUTED PAPERS.

Chair: A.M. Haeussler, Arizona State University, Tempe.

- 8:00 AM Deciduous crown formation times determined by histological microstructural analysis. C. Fitzgerald, S.R. Saunders, McMaster University, Hamilton, ON, R. Macchiarelli, L. Bondioli, National Prehistoric Ethnographic "L. Pigorini" Museum, Rome, Italy.
- 8:15 The periodicity of enamel cross-striations based on the developing permanent dentition of known-age children from Spitalfields. D.M. Antoine, M.C. Dean, S.W. Hillson, University College London, UK.

- 8:30 Permanent teeth emergence symmetry in functional lateralities. T. Heikkinen, L. Alvesalo, University of Oulu, Finland, R.H. Osborne, University of Wisconsin, Madison, J. Tienari, University of Oulu, Finland.
- 8:45 The Iberomaurusians: Ancestors to subsequent North African peoples or a genetic dead-end? J.D. Irish, University of Alaska, Fairbanks.
- 9:00 The southern Levant: Corridor to Nubia. Peopling of the Eurafrikan-South Asian triangle IV. J.G. Lipschultz, C.G. Turner II, Arizona State University, Tempe.
- 9:15 Russian Far East Neolithic burials: Comparative dental anthropological analysis of Boisman 2. A.M. Haeussler, Arizona State University, Tempe.
- 9:30 The Pleistocene-Holocene transition in Italy. The contribution of the morphological dental traits. A. Coppa, A. Cucina, R. Vargiu, Università di Roma "La Sapienza," Italy, D. Mancinelli, Università de L'Aquila, Italy, M. Lucci, Università di Sassari, Italy.
- 9:45 Dental size and morphology of precontact Marshall Islanders compared with other Pacific islanders. D.R. Swindler, University of Washington, Seattle, M.I. Weisler, University of Otago, Dunedin, New Zealand, S.L. Collins, State Historic Preservation Office, Honolulu.
- 10:00 INTERMISSION
- 10:15 The Indodont dental pattern of prehistoric South Asia and early world affinities. D.E. Hawkey, State University of New York, Binghamton.
- 10:30 Stable isotope analysis of the diet of the inhabitants of the Ancient Greek colony of Metaponto in Italy, 7th-2nd c BCE. R. J. Henneberg, University of Adelaide, South Australia, F.D. Pate, Flinders University, Adelaide, South Australia, M. Henneberg, University of Adelaide, South Australia.
- 10:45 Dental pathology and stable isotope analysis: Dietary implications for the site of Ingombe Ilede, Zambia. K.A. Murphy, Indiana University, Bloomington.
- 11:00 Tooth wear and diet. K.L. Brandt, State University of New York, Albany, B.H. Smith, University of Michigan, Ann Arbor.
- 11:15 Enamel microdefects and childhood morbidity among historic African-Americans. M.K. Marks, D.C. Benedix, University of Tennessee, Knoxville.

SATURDAY, MAY 1, 1999

SESSION 26 / SESSION 27A / SESSION 27B

- 11:30 Investigating the relationship between social roles and dental disease: Variation within Ontario Iroquoian ossuary populations. C.M. Crinnion, McMaster University, Hamilton, ON.
- 11:45 The dental paradox? Dental lesions and systemic health. N. Tayles, G.J. Dias, University of Otago, Dunedin, New Zealand.

SESSION 27A: MORROW

PALEOANTHROPOLOGY VII : PRIMATE EVOLUTION. CONTRIBUTED PAPERS.

Chair: R.L. Anemone, Western Michigan University, Kalamazoo.

- 8:00 AM Euprimate origins and postorbital bar function: The carnivoran and pteropodid evidence. M.J. Ravosa, Northwestern University Medical School, Chicago, Field Museum of Natural History, Chicago, V.E. Noble, Northwestern University, Chicago, E.M. Kowalski, Northwestern University, Evanston.
- 8:15 Orbital convergence in small-bodied arboreal, nocturnal mammals: Implications for primate origins. P.J. Trumppower, Kent State University, Kent.
- 8:30 Cranial base architecture and the scaling relationships of the anthropoid skull. R.C. McCarthy, George Washington University, Washington, DC.
- 8:45 *In vivo* intraorbital bone strain in anthropoid primates during mastication and incision. C.F. Ross, State University New York, Stony Brook.
- 9:00 Temporomandibular translation in non-human primates and hominids. D.E. Lieberman, George Washington University, Washington, DC., A.W. Crompton, Harvard University, Cambridge.
- 9:15 Scaling of lumbar vertebrae in anthropoid primates: Its implications for the positional behavior and phylogenetic affinities of *Proconsul*. T. Harrison, New York University, W.J. Sanders, University of Michigan, Ann Arbor.
- 9:30 The ecological diversity of paleoprimates communities from African Pliocene hominin-bearing localities. B.M. McBratney, K.E. Reed, Arizona State University, Tempe.

SESSION 27B: MORROW

PRIMATES VIII: PRIMATE BIOLOGICAL VARIATION. CONTRIBUTED PAPERS.

Chair: D. Schmitt, Duke University, Durham.

SATURDAY, MAY 1, 1999

SESSION 27B / SESSION 28

- 10:00 AM Gait patterns and interlimb coordination in woolly opossums: How did ancestral primates move? P. Lemelin, D. Schmitt, M. Cartmill, Duke University, Durham.
- 10:15 Forelimb and hind limb angular excursions in primates: Which is unique? S.G. Larson, State University of New York, Stony Brook, D. Schmitt, C. Sipe, Duke University, Durham.
- 10:30 The influence of locomotor function on postcranial variation in hominoids and monkeys. P.S. Vinyard, Washington University, St. Louis.
- 10:45 The development and evolution of relative tail length in *fascicularis*-group macaques (Cercopithecidae: *Macaca*). G.H. Albrecht, University of Southern California, Los Angeles, J. Fooden, Field Museum of Natural History, Chicago.
- 11:00 Positional behavior of *Varecia variegata rubra* and *Lemur fulvus albifrons*. N. Vasey, Pennsylvania State University, University Park.
- 11:15 Interspecific variation in body composition and its influence on metabolic variation in primates and other mammals. J.J. Snodgrass, University of Florida, Gainesville, W.R. Leonard, M.L. Robertson, Northwestern University, Evanston.
- 11:30 Variation in inhibin, and activin levels in baboons. L.J. Martin, Southwest Foundation of Biomedical Research, San Antonio, University of Kansas, Lawrence, M.H. Crawford, University of Kansas, Lawrence, A.G. Comuzzie, Southwest Foundation of Biomedical Research, San Antonio.

SESSION 28: FRANKLIN BCD

PALEOPATHOLOGY IV AND FORENSIC ANTHROPOLOGY I. POSTERS.

Chairs: R.L. Hall, Oregon State University, Corvallis, and M.C. Hill, University of Massachusetts, Amherst.

Times: 8:00-8:30 AM Poster set-up.
 8:30-10:00 AM Authors of even-numbered posters present for questions.
 10:30 AM-12:00 PM Authors of odd-numbered posters present for questions.
 12:00-12:30 PM Poster take-down.

1. Preliminary analysis of "Kennewick Man," a Paleoamerican skeleton from the Northwestern United States. J.C. Chatters, Applied Paleoscience, Richland, WA.
2. Regional differences in cranial morphology. M.W. Warren, H.A. Walsh-Haney, K.R. Smith, P.R. Stubblefield, J.J. Schultz, A.B. Falsetti, University of Florida, Gainesville.

3. Are Paleoindians too variable to be from one population?: A test of a single migration origin. E.G. Ozolins, University of New Mexico, Albuquerque.
4. When two worlds collide: Biology and culture in the Glacial Kame Archaic. A.R. Nelson, University of Michigan, Ann Arbor.
5. History and demography of the Robert J. Terry Anatomical Collection. D.R. Hunt, Smithsonian Institution, Washington, DC.
6. The history of prehistory: An analysis of a skeletal sample from Cahokia. R.L. Tropea, A.L. Grauer, Loyola University, Chicago.
7. Web-based instruction in biological anthropology. D.M. Mulhern, Smithsonian Institution, Washington, DC.
8. A Java program for the calculation of minimum number of individuals from commingled and fragmented skeletal samples. G. Gebhardt, Harvey Mudd College, L. Teneyck, E.A. Rega, W.M. Keck Science Center, The Claremont Colleges, CA.
9. Forensic anthropology: Education through internship. M.K. Spradley, University of Arkansas, Fayetteville.
10. A standardized methodology for scoring vertebral osteophytosis. K.C. Nystrom, M.A. Schillaci, E.A. Carson, M.L. Rhoads, E.G. Ozolins, University of New Mexico, Albuquerque.
11. Clues potentially distinguishing cerebral palsy in bioarchaeological analysis. A. Sansone, State University of New York, Albany.
12. Analysis of a standard for use in scoring of anemia. K.P. Jacobi, University of Alabama, Tuscaloosa, M.E. Danforth, University of Southern Mississippi, Hattiesburg.
13. Calcaneal erosions as a marker of inflammatory arthritis during the Late Woodland period. S.E. Niebuhr, Indiana University, Bloomington, E.M. Braunstein, Indiana University, Indianapolis.
14. Fitting mixture distributions to estimate adult demographic structure in skeletal samples. R.D. Hoppa, Max Planck Institute for Demographic Research, Rostock, Germany, S.R. Saunders, P. MacDonald, McMaster University, Hamilton, ON.
15. Are we asking the right questions about porotic hyperostosis? M.C. Hill, University of Massachusetts, Amherst.

16. Taphonomy or treponematosi?: Distinguishing pathological change from postmortem alteration. S.A. Hurlbut, G.E. Berg, Archaeological Consulting Services, Ltd, Tempe.
17. Serpens Endocrania Symmetrica (SES): A new term and possible sign of cranial tuberculosis. C.M. Greenwald, B. Latimer, L.M. Jellema, Cleveland Museum of Natural History, I. Herskovitz, Tel Aviv University, Israel, O. Dutour, Université de la Méditerranée, Marseille, France, B.M. Rothschild, Arthritis Center of Northeast Ohio, Youngstown.
18. Allometric relationships of Americans, Croatians, and Bosnians. A.H. Ross, R.L. Jantz, University of Tennessee, Knoxville, D.W. Owsley, Smithsonian Institution, Washington, DC, Z. Cihlarž, T. Vedo, Sudsku Medicinu, Tuzla, Bosnia, M. Slauš, D. Strinović, University of Zagreb, Croatia.
19. Hopewellian culturally modified human remains. C.A. Johnston, P.W. Sciulli, L.A. Mills, Ohio State University, Columbus.
20. Cultural modification of bone: A study of cutmark morphology, location, and orientation on human remains from Northern Mexico. V.R. Perez, University of Massachusetts, Amherst, D.L. Martin, Hampshire College, Amherst, MA.
21. Bioarchaeological evidence for atl-atl use in prehistory. B.L.B. Nagy, Arizona State University, Tempe.
22. Sexual differences in activity patterns of a Central Californian hunter-gatherer population. E. Weiss, University of Arkansas, Fayetteville.
23. Intentional artificial cranial deformation and its relation to sex in a Pre-Columbian population from San Pedro de Atacama, northern Chile. C. Torres, University of California, Santa Barbara.
24. "All God's Children." Subadult health in a Byzantine Jerusalem monastery. R.A. Sanders, S.G. Sheridan, University of Notre Dame, IN.
25. Frequency and form of the supracondylar spur trait in ancient Nubians. D.T. Case, S.E. Burnett, Arizona State University, Tempe.
26. Greek colonization of the Black Sea: A paleopathological study. A. Keenleyside, University of London, Egham, Surrey, U.K.
27. Paleodemography and paleopathology of a Bronze Age skeletal population from Tell Abraq, United Arab Emirates. D.L. Martin, P.K. Stone, N. Parker, Hampshire

- College, Amherst, MA, M.M. Margolis, Fort Lewis College, Durango, CO, F. Harrod, V.R. Perez, University of Massachusetts, Amherst.
28. Sexual dimorphism in two Byzantine populations from Jordan. N.A. Parker, Hampshire College, Amherst, MA.
 29. From hunting to farming: The impact on health status in Western Liguria (Italy). V. Formicola, A. Canci, University of Pisa, Italy.
 30. Evidence of demographic crises in 18th century in urban community (Martigues, France). M. Signoli, S. Bello, Gy. Pálfi, O. Dutour, UMR 6578 CNRS - University de la Méditerranée, Marseille, France.
 31. Asymmetry in Arikara long bones. D.J. Wescott, University of Tennessee, Knoxville, D.L. Cunningham, University of Missouri, Columbia.
 32. Modern cemeteries as research resources: The Spring Grove Project. L.A. Schepartz, D. Coning, A.M. Freeman, University of Cincinnati.
 33. Cremated human remains from a fourteenth century Iroquoian village. D.C. Merrett, University of Guelph, ON.
 34. A bioarchaeological study of the late 17th century cemetery at Onondaga. C.A. Raemsch, T. R. Jamison, Hartgen Archeological Associates, Inc, Troy, NY.
 35. Dental and postcranial changes in an historic Chumash population. C.M. Kellner, University of California, Santa Barbara.
 36. Analysis of an Archaic Burial (41YK2) from Yoakum County, Texas. R.R. Paine, Texas Tech University, Lubbock, P.J. Lewis, Duke University, Durham.
 37. Osteological evidence for population replacement in the Channel Island region of California. S.L. Kerr, G.M. Hawley, University of California, Santa Barbara.
 38. Anthropometric and biomechanical assessment of skeletal structural adaptations during the postcontact period in Michigan. D.A. Barondess, Wayne State University, Detroit.
 39. Bioarchaeology at La Quemada: Current investigations on the mesoamerican mortuary program of the Malpaso Valley. D. To, Arizona State University, Tempe.
 40. Reconstructing health and disease in a population from Canyon de Chelly. R. McGurk, A.L. Grauer, Loyola University, Chicago.

SATURDAY, MAY 1, 1999

SESSION 28 / SESSION 29

- 41. Evidence of stress and variation within the Fort Ancient Culture of the Ohio River Valley. E.A. Brown, A.L. Grauer, Loyola University, Chicago, E.M. McNamara, University of Illinois, Urbana.
- 42. Reducing the subjective component in recognition of periosteal reaction. B. Rothschild, C. Rothschild, Arthritis Center of Northeast Ohio, Youngstown, NE Ohio Universities College of Medicine, Rootstown.

SATURDAY AFTERNOON, MAY 1, 1999

SESSION 29: UNION DE

PALEOPATHOLOGY V AND FORENSIC ANTHROPOLOGY II. CONTRIBUTED PAPERS.

Chair: S.G. Sheridan, University of Notre Dame, IN.

- 1:00 PM Age-related osteopenia in African apes and humans: The perils of being bipedal. C.A. Kunos, B. Latimer, Case Western Reserve University, Cleveland Museum of Natural History.
- 1:15 Occupational stress and trends toward asymmetry in two African skeletal populations. C.S. Clark, New Mexico State University, Las Cruces.
- 1:30 Investigating intracemetery variation at the Sully site (39SL4), South Dakota, via the "New Morphometry." A.H. McKeown, University of Tennessee, Knoxville.
- 1:45 A multivariate craniometric study of the Ryukyu Islanders and their relationship with the prehistoric and modern peoples of Japan, Asia, and the Pacific. M. Pietrusewsky, University of Hawai'i-Manoa, Honolulu.
- 2:00 Biological distance measures between Middle Missouri skeletal samples: A metric and nonmetric comparison. N.P. Herrmann, R.L. Jantz, University of Tennessee, Knoxville.
- 2:15 Biomechanics of long bone diaphyses from Cochiti Reservoir, New Mexico. P.S. Bridges, City University of New York, M.O. Smith, Northern Illinois University, DeKalb, M.C. Solano, State University of New York, Albany.
- 2:30 New evidence on Predynastic burial methods in Egypt. A.J. Maish, University of Toronto, T.L. Tucker, Ohio State University, Columbus.
- 2:45 Mortuary practice in ritual contexts among the Postclassic Maya, El Petén, Guatemala. W.N. Duncan, Southern Illinois University, Carbondale.

SATURDAY, MAY 1, 1999

SESSION 29 / SESSION 30

- 3:00 INTERMISSION
- 3:15 A better approach to analyzing prehistoric human remains: The advantages of using both field and laboratory analyses. G.E. Berg, P.D. Minturn, Archaeological Consulting Services, Ltd., Tempe, AZ, Arizona State University, Tempe.
- 3:30 Analysis of commingled skeletal remains from a pre-contact cave site in the Jackson's Bay Cave series, Jamaica. E.A. Rega, J. Michaelson, L. Teneyck, W.M. Keck Science Center, The Claremont Colleges, CA.
- 3:45 Cultural patterning in domestic and other forms of interpersonal violence: Implications for bioarchaeology. A. Alvrus, Arizona State University, Tempe, P.L. Walker, University of California, Santa Barbara.
- 4:00 Burials from an historic Hudson Bay Company cemetery at Fort Frances, Ontario: A case study in applied forensic osteology. T.R. Peckmann, University of Cape Town, South Africa.
- 4:15 The use of prior probabilities in ageing perinatal skeletal remains: Implications for the evidence of infanticide in Roman Britain. R.L. Gowland, A.T. Chamberlain, University of Sheffield, U.K.
- 4:30 The human skeletal material from the Swedish man-of-war *Kronan* - a cultural-historical interpretation with question-marks. E.M. Durning, Stockholm University, Sweden.
- 4:45 The bones from Benjamin Franklin's house at Craven Street, London. S.W. Hillson, H.A. Waldron, L.A. Martin, University College London, UK, B. Owen-Smith, Friends of Benjamin Franklin House, London, UK.

SESSION 30: FAIRFIELD

GENETICS IV: ANTHROPOLOGICAL DIVERSITY AND COMPLEX DISEASES. SYMPOSIUM. Genes underlying common complex diseases are generally much more polymorphic than those that cause simple rare genetic disorders. Chronic diseases are also often caused by susceptibility differences at more than one gene. Furthermore, diversity of populations add environmental contributions to such phenotypes in a more complex fashion. In this symposium recent approaches to integrate the principles of anthropological diversity in studying the etiology and distribution of complex phenotypes will be discussed. Presentations will cover analytical approaches and study design strategies. Recent progress towards understanding the genetic basis and its interaction with environmental risk factors (in relation to lung cancer, adult-onset diabetes, essential hypertension, cardiovascular diseases, HIV-infection, and skin pigmentation) will be outlined.

SATURDAY, MAY 1, 1999

SESSION 30

Organizer

and Chair: R. Chakraborty, University of Texas School of Public Health, Houston.

Co-sponsored by the American Association of Anthropological Genetics.

- 1:00 PM Introduction (no abstract). R. Chakraborty, University of Texas School of Public Health, Houston.
- 1:15 Role of mixtures of genetic admixture in susceptibility to complex diseases. R. Chakraborty, University of Texas School of Public Health, Houston.
- 1:30 Evolution of haplotypes and complex diseases. A.R. Templeton, Washington University, St. Louis.
- 1:45 Power determinations for ancestral haplotypes in genome scanning for mapping of disease genes. M. Kimmel, Rice University, Houston, R. Chakraborty, University of Texas School of Public Health, Houston.
- 2:00 Genetic and phenotypic diversity in Old Order Mennonites. A. Chakravarti, Case Western Reserve, Cleveland.
- 2:15 Variation at candidate genes for mental disorders. K.K. Kidd, Yale University, New Haven.
- 2:30 Expanded alleles and hypermutability at a trinucleotide repeat locus in the general population: Implications on the stability of the human genome. R. Deka, S. Guangyun, D. Smelser, S. Chunhua, University of Cincinnati, R. Chakraborty, University of Texas School of Public Health, Houston.
- 2:45 Use of baboons as an animal model to study heart disease. J.E. Hixson, Southwest Foundation for Biomedical Research, San Antonio.
- 3:00 Variation at the human melanocortin 1 receptor locus: Possible role in human pigmentation variation. B.K. Rana, D. Hewett-Emmett, W.-H. Li, University of Texas, Houston.
- 3:15 INTERMISSION
- 3:30 Mapping quantitative trait loci influencing normal human variation: The genetics of skin reflectance. J. Blangero, L. Almasy, Southwest Foundation for Biomedical Research, San Antonio, R. Duggirala, University of Texas Health Science Center, San Antonio, S. Williams-Blangero, Southwest Foundation for Biomedical Research, San Antonio, P. O'Connell, M.P. Stern, University of Texas Health Science Center, San Antonio.

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- 3:45 Genetic diversity and the occurrence of elevated blood pressure levels: A model system for genetic and demographic interactions. E. Boerwinkle, University of Texas Health Science Center, Houston.
- 4:00 Genes and their interactions with environmental risk factors of type 2 diabetes: Experiences from studies of Mexican Americans. C.L. Hanis, University of Texas Health Science Center, Houston.
- 4:15 Stressing the system to learn more about the role of genetic variation in human physiology. R.E. Ferrell, University of Pittsburgh.
- 4:30 Comparison of genetic and environmental risk factors for lung cancer in three populations. C.I. Amos, M.R. Spitz, University of Texas, Houston.
- 4:45 Distribution of HIV-1 resistant polymorphisms (CCR5- Δ 32, SDF1-3'A and CCR2-641) in East Asia and world populations and its implication in AIDS epidemiology. L. Jin, B. Su, R. Chakraborty, University of Texas School of Public Health, Houston.
- 5:00 A complex adaptive systems approach to the study of common multifactorial diseases. C.F. Sing, M.R. Nelson, J.H. Moore, S.L. Kardia, University of Michigan, Ann Arbor.

SESSION 31: MORROW

PALEOPATHOLOGY VI: INFANT FEEDING AND NUTRITION: NEW APPROACHES TO CHILDHOOD HEALTH IN PREHISTORY. SYMPOSIUM.

This session will draw together diverse approaches to the biocultural study of childhood health in the past. Infancy and early childhood are critical years for growth and development during which cultural ideals about child feeding, food choices, and household economic factors can have profound consequences for the health of children. Ultimately, childhood nutrition is directly linked to survivorship and the demographic structure of a population. Focussing on methodological advances in the bioarchaeological study of early childhood nutrition, this session will include a combination of paleodietary, paleopathological and skeletal biological research from varied regions of the world.

Organizers

and chairs: L.E. Wright and J. Baker, Texas A&M University, College Station.

- 1:00 PM Introduction: Childhood nutrition and health in prehistory. J. Baker, L. Wright, Texas A&M University, College Station.
- 1:15 A re-examination of factors contributing to elevated stable nitrogen isotope values in infants and young children. M.A. Katzenberg, University of Calgary, AB.

- 1:30 Infant feeding practices in Roman Egypt: Evidence from the Dakhleh Oasis, Egypt. T.L. Dupras, H.P. Schwarcz, McMaster University, Hamilton, ON, S.I. Fairgrieve, Laurentian University, Sudbury, ON.
- 1:45 Changes in infant nutrition with the evolution of food production: Istotopic evidence from the North American Midcontinent. M.R. Schurr, University of Notre Dame, IN, M.L. Powell, University of Kentucky, Lexington..
- 2:00 Stable isotopic analysis of enamel microsamples: Examining childhood dietary change at Kaminaljuyu, Guatemala. L. E. Wright, Texas A&M University, College Station.
- 2:15 Inferences for childhood nutrition from laser ablation inductively coupled plasma-mass spectrometry (LA-ICP-MS) of dental hard tissues. R.J. Song, University of Massachusetts, Amherst, A.H. Goodman, Hampshire College, Amherst, MA.
- 2:30 Infant feeding practices at Altun Ha, Belize: Four stable isotope measures. C.D. White, F.J. Longstaffe, University of Western Ontario, London, ON.
- 2:45 INTERMISSION
- 3:00 Trace elements in dental enamel as an indicator of dietary change in an Oneota population. E.A. Petchenkina, University of Missouri, Columbia.
- 3:15 Multivariate Modeling of childhood diet and health in Prehistoric Peru. J. Farnum, University of Missouri, Columbia.
- 3:30 Status and health among the Ancient Maya at Tikal, Guatemala. M.E. Danforth, University of Southern Mississippi, Hattiesburg.
- 3:45 Keeping alive children who are failing to thrive in an Archaic fishing village in coastal Peru. R.A. Benfer, University of Missouri, Columbia.
- 4:00 Maize, midden, and mollusc: Interpreting subadult diet and pathology in Late Woodland coastal North Carolina. D.L. Hutchinson, East Carolina University, Greenville, NC, L. Norr, University of Florida, Gainesville.
- 4:15 Discussant. K. Dettwyler, Texas A&M University, College Station.
- 4:30 Discussant. D. Cook, Indiana University, Bloomington.

SESSION 32: MADISON

SKELETAL BIOLOGY IV. CONTRIBUTED PAPERS.

Chair: T.M. Cole III, University of Missouri, Kansas City.

- 1:00 PM Effect of maternal infant-handling behaviors on neuromuscular development in rural Papua New Guinea. S.L. Wyckoff, M.G. Wimmer, University of Washington, Seattle, D.P. Tracer, University of Colorado, Denver.
- 1:15 Effects of age and body composition on average glycemia among Maya females in rural Yucatan. P.A. McLorg, Southern Illinois University, Carbondale.
- 1:30 Differential maturational delay is evident in girls, but not boys, from a comparative longitudinal study of South African rural versus urban "Cape Coloured" children. M. LaVelle, University of Rhode Island, Kingston, M. Henneberg, University of Adelaide Medical School, Australia.
- 1:45 Spatial distribution of coronal sutural bones in familial coronal suture synostosis. A.M. Burrows, M.J. Fabrizio, T.D. Smith, Slippery Rock University, M.P. Mooney, H.W. Losken, M.I. Siegel, University of Pittsburgh.
- 2:00 Familial trigonocephaly in rabbits. M.P. Mooney, G.M. Cooper, A.M. Burrows, W. Wigginton, T.D. Smith, J. Dechant, H.W. Losken, M.I. Siegel, University of Pittsburgh, Slippery Rock University.
- 2:15 How "Caucasoids" got such big crania and why they shrank: Changing hierarchies of race, brain size and intelligence from Morton to Rushton. L. Lieberman, Central Michigan University, Mt. Pleasant.
- 2:30 Symmorphosis and the respiratory capacity of the upper airway. T.L. Estenson, University of New Mexico, Albuquerque.
- 2:45 Integrating the inside with the outside: Assessments of external and internal nasal parameters in extant humans. D. Lewis, S. Marquez, T. Bromage, K. Mowbray, D. Broadfield, J.T. Laitman, Mount Sinai School of Medicine, New York, City University of New York, Rutgers University, New Brunswick.
- 3:00 INTERMISSION
- 3:15 Relationship of body composition components to bone loss. W.A. Stini, University of Arizona, Tucson.

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- 3:30 Bone strain in the macaque tibia during functional activity. B. Demes, Y. Qin, J.T. Stern, S.G. Larson, C.T. Rubin, State University of New York, Stony Brook.
- 3:45 Histomorphometric and gross geometric correlates in the femoral midshaft: Relation to the local mechanical loading environment. A.G. Robling, University of Missouri, Columbia.
- 4:00 The femur is mightier than the tibia: Inferring activity levels using limb bone cross-sectional properties. O.M. Pearson, D.E. Lieberman, George Washington University, Washington, DC.
- 4:15 Stresses, strains and adaptive remodelling in trabecular bone: A finite element approach. J. Hirschberg, N. Milne, C.E. Oxnard, University of Western Australia.
- 4:30 Physical status of Aborigines in two South Australian reserves. M. Henneberg, K.M. Lambert, University of Adelaide, Australia.
- 4:45 The inclination of the resultant vector of jaw muscle force. W.S. Greaves, University of Illinois, Chicago.

SESSION 33: FRANKLIN BCD

DENTAL ANTHROPOLOGY II. POSTERS.

Chair: C.F. Hildebolt, Washington University, St. Louis, MO.

- Times:* 1:00-1:30 PM Poster set-up.
1:30-3:00 PM Authors of even-numbered posters present for questions.
3:00-4:30 PM Authors of odd-numbered posters present for questions.
4:30-5:00 PM Poster take-down.
1. The tempo of dental maturation: Caucasoid population differences. E.F. Harris, University of Tennessee, Memphis.
2. Crown formation times of human permanent anterior teeth. H.M. Liversidge, University of London, UK.
3. The relation of handedness on asymmetry in occlusal morphology of first permanent molars. P. Pirttiniemi, K. Pirilä-Parkkinen, L. Alvesalo, O. Silvén, J. Heikkilä, University of Oulu, Finland, R.H. Osborne, University of Wisconsin, Madison.

4. The dentition of modern Finnish peoples. A. Adler, Arizona State University, Tempe, L. Alvesalo, University of Oulu, Finland, C.G. Turner II, Arizona State University, Tempe.
5. Examination of the rare buccal style on human incisors. C. Lee, S.E. Burnett, C.G. Turner II, Arizona State University, Tempe.
6. Non-metric dental variation in remains from a Byzantine monastic community in Jerusalem. J. Cheadle, University of Maryland, Baltimore, S.G. Sheridan, University of Notre Dame, IN.
7. The diet of worms: An analysis of mole microwear and its relevance to dietary inference in primates and other mammals. M.T. Silcox, M.F. Teaford, Johns Hopkins University, Baltimore.
8. Incisor labial wear striations in modern humans and inferences for behavior in Middle and Late Pleistocene hominids. J.S. Bax, University of Colorado, Boulder, P.S. Ungar, University of Arkansas, Fayetteville.
9. Reconstruction of subsistence practices at farming hamlets in the Southeastern U.S. using microwear analysis. B.K. Fredericksen, University of Southern Mississippi, Hattiesburg.
10. Association between occlusal form and tooth wear. N. Seguchi, University of Michigan, Ann Arbor.
11. Diet and occlusal disease in ancient Egyptian skulls. P.-F. Puech, G. Susini, R. Notonier, Faculté d'Odontologie à Marseille, Nîmes, France.
12. Fossil tooth enamel composition. H.A. Reeser, M.J. Schoeninger, J. Valley, J. Fournelle, University of Wisconsin, Madison.
13. Isotopes and teeth: A comparative study of prehistoric foraging populations from tropical Southeast Asia. J.S. Krigbaum, New York University.
14. Enamel microdefects as indicators of socioeconomic affiliation in a modern sample. L.M. Mifsud, University of Tennessee, Knoxville.
15. Analysis of dental remains for Honduran ossuary caves. D.C. Benedix, N.P. Herrmann, University of Tennessee, Knoxville, V.A. Haskins, Adirondack Community College, Queensbury, L.E. Flournoy, University of Tennessee, Knoxville.

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16. Oral health in Southeast Asia. K.M. Dommett, University of Otago, Dunedin, New Zealand.
17. The effects of subsistence economy on the dental health of individuals from Spiro Mounds, Oklahoma. A.T. Mayes, University of Colorado, Boulder.
18. Dental pathology and anthropology of Cephalonians at the Roman site of Fiskardo, Greece. A. Konstantatos, Arizona State University, Tempe.
19. Dental health in nineteenth century Rochester, New York, as evidenced by skeletal remains from the Highland Park Cemetery. S. Patel, J.E. Sirianni, State University of New York, Buffalo.
20. Exploring the relation between muscle insertion dimensions and tooth use. R.T. Koritzer, L.E. St. Hoyme, Smithsonian Institution, Washington, DC.

SESSION 34: FRANKLIN BCD

PALEOANTHROPOLOGY VIII: PRIMATE EVOLUTION. POSTERS.

Chair: R.E. Wunderlich, Pennsylvania State University, University Park.

<i>Times:</i>	1:00-1:30 PM	Poster set-up.
	1:30-3:00 PM	Authors of even-numbered posters present for questions.
	3:00-4:30 PM	Authors of odd-numbered posters present for questions.
	4:30-5:00 PM	Poster take-down.

21. Primates and other mammals from the Great Divide Basin, SW Wyoming: Systematics, geology, and chronology. R.L. Anemone, E.M. Johnson, C.M. Rubick, Western Michigan University, Kalamazoo.
22. The oldest Argentine primates: First age determinations for the Colhuehuapian South American Land Mammal 'Age'. R.F. Kay, R.H. Madden, Duke University, Durham, M. Mazzoni, M.G. Vucetich, Univ. Nac. de La Plata, G. Re, Univ. de Buenos Aires, M. Heizler, New Mexico Geochron. Res. Lab, H. Sandeman, Geol. Sur. Canada.
23. Adaptations of Fayum Primates. P.J. Lewis, E.L. Simons, Duke University Primate Center, Durham.
24. Estimated body weight and degree of sexual dimorphism for *Victoriapithecus macinnesi*, a Miocene cercopithecoid. S.N. Zambon, M.L. McCrossin, B.R. Benefit, Southern Illinois University, Carbondale.

25. Cranial capacity trends in African Plio-Pleistocene cercopithecoids. S. Elton, University of Cambridge, UK.
26. Functional morphology of the cranio-orbital region in *Theropithecus brumpti*: Taxonomic and phylogenetic implications. W.D. Moore, B.R. Benefit, M.L. McCrossin, Southern Illinois University, Carbondale.
27. Still no evidence for a tail in *Proconsul heseloni*. C.V. Ward, University of Missouri, Columbia, A. Walker, Pennsylvania State University, University Park, M.F. Teaford, Johns Hopkins University, Baltimore.
28. Comparative paleoecology of *Ankarapithecus meteai* and *Sivapithecus parvada*. R. Scott, University of Texas, Austin, M. Armourchelu, R. Bernor, Howard University, Washington, DC, J. Kappelman, University of Texas, Austin, J. Kelley, University of Illinois, Chicago.
29. Morphology and identification of a previously undescribed fossil catarrhine tooth from the middle Miocene of Romania. K.P. McNulty, City University of New York, NYCEP, C. Radulesco, P. Samson, M. Feru, Institutul de Speologie "Emil Racovitza," Bucharest, Romania, E. Delson, City University of New York, NYCEP, American Museum of Natural History.
30. Hylobatid Systematics: An analysis based on morphological and molecular data. H. Chatterjee, I. Barnes, M. Thomas, University College London, UK.
31. Locomotion-related iliac trabecular patterns in fossil and extant primates. R. Macchiarelli, L. Bondioli, National Prehistoric Ethnographic "L. Pigorini" Museum, Rome, Italy, L. Rook, University of Florence, Italy.
32. The derived nature of primate cheiridial morphology and evolution of postural diversity in archontan mammals. M.W. Hamrick, R. O'Neal, Kent State University, Kent.
33. Body weight trajectories in primate evolution: The evidence from nails and claws. C. Soligo, A.E. Müller, Universität Zürich-Irchel, Switzerland.
34. Evaluation of alleged Sasquatch footprints and inferred functional morphology. D.J. Meldrum, Idaho State University, Pocatello.
35. Primate dental development and the reconstruction of life history strategies in subfossil lemurs. K.E. Samonds, State University of New York, Stony Brook, L.R. Godfrey, University of Massachusetts, Amherst, W.L. Jungers, L.B. Martin, State University of New York, Stony Brook.

- 36. The taphonomy of bones digested by free-ranging chimpanzees in the Kibale Forest, Uganda. M. Tappen, University of Minnesota, Minneapolis-St. Paul, R. Wrangham, Harvard University, Cambridge.
- 37. Cerebellar smarts: The expansion of the lateral lobes in primate evolution. C.E. MacLeod, J.K. Rilling, T.R. Insel, Simon Fraser University, Burnaby, BC, Emory University, Atlanta.
- 38. Modelling species lineages. K.P. Wessen, C.E. Oxnard, University of Western Australia.
- 39. Phylogenetic effects and the problem of nonindependence in comparative analysis. J.M. McMahon, City University of New York.